

# PUBLIC HEALTH REPORTS

VOL. 38

FEBRUARY 9, 1923

No. 6

## THE MALARIA PROBLEM OF SOUTHEAST MISSOURI.<sup>1</sup>

### I. GENERAL DISCUSSION OF THE LOCALITY.

By K. F. Maxey, Assistant Surgeon, United States Public Health Service.

During the World War the antimalaria forces of the United States Public Health Service were employed in extra cantonment-zone sanitary work. Upon resumption of malaria field investigations by the Service at the close of the war, a cooperative agreement was entered into with the International Health Board and the health authorities of 10 Southern States, which enabled malaria investigations and demonstrations to be conducted in many localities of these States. In 1920 a reorganization of the Missouri State health department was undertaken, and through this reorganization an opportunity was afforded for studying the malaria problem of southeast Missouri, which had been under consideration for several years.

Mortality returns first called attention to the relative seriousness of the malaria problem in southeast Missouri. For this group of seven counties—Butler, Dunklin, Mississippi, New Madrid, Pemiscot, Scott, and Stoddard—the mean death rate from this disease for the three years just past—1919, 1920, 1921—was 5 per 10,000 population. During the same period the mean rate for the Mississippi Delta—long known as a hotbed of malaria—was 9 per 10,000. In 1919, in the State of Missouri, Dunklin County registered a death rate from malaria of 12 per 10,000; in Alabama the highest rate registered by any county during the same year was 4. This is somewhat contrary to the common opinion, most people thinking of malaria intensity in the United States as increasing as one goes southward.

The reason for the high malaria rate in a State so far north will be readily appreciated from a consideration of the geographical features of this section and the history of its development.

### TOPOGRAPHY.

The region under consideration is commonly referred to as the "lowlands" of southeast Missouri (see map, p. 238). It corresponds in its topography<sup>2</sup> to the delta region in Mississippi. In fact it is

<sup>1</sup> From Field Investigation of Malaria, United States Public Health Service.

<sup>2</sup> A good description of the topography and its evolution will be found in an article by Prof. C. F. Marbut, "The Evolution of the Northern Part of the Lowlands of Southeast Missouri," *The University of Missouri Studies*, 1902, vol. 1, No. 3, and in the "Soil Survey of Pemiscot County, Mo.," U. S. Dept. of Agriculture, 1912.

sometimes called the Missouri Delta. Briefly, the Mississippi flood plain widens rapidly just below Cape Girardeau. At a distance 10 miles south of Cape Girardeau an east-and-west line from the present channel of the Mississippi to the western edge of the lowlands would extend 30 miles; whereas a similar line 35 miles south of Cape Girardeau, in the latitude of Poplar Bluff, would be nearly 70 miles long. Part of the widening in this case is due to an eastward swing of the Mississippi River. The western and northern boundary of the lowlands is sharp and well defined, and in many cases consists of steep, rocky bluffs, varying in height from 50 to almost 100 feet and leading back to the foothills of the Ozarks.

In the northern part of the lowlands there are a number of ridges trending generally northeast and southwest or north and south. The most important of these are Benton Ridge and Crowley Ridge, the latter extending southwest into Arkansas for a distance of 40 miles. The high, rolling farm land of these ridges stands out in sharp relief from the surrounding flat low plains. Sikeston Ridge and Sand Ridge rise only a few feet above the level of the surrounding country, but this slight elevation makes a great difference from the point of view of drainage and cultivation.

The land which lies along the east side of the lowlands next to the Mississippi River is slightly higher than that farther inland from the river, thus preventing direct drainage into it. It will be noted that the streams flow southward, parallel to the Mississippi, separated by the ridges mentioned, to find their way ultimately into tributaries of that river far down in Arkansas. There are two main flood plains; that of the Little River and that of the St. Francis. It is thought that at one time the Mississippi River cut through north of Benton Ridge and flowed down through the flood plain of Little River, forming this great lowland region, and that in comparatively recent times, geologically, the channel changed to its present course.

As late as 1900 these great lowlands of southeast Missouri were a vast wooded swamp. The Whitewater River and the Castor River, bringing volumes of water from the hills to the north, discharged them into the shallow, tortuous, winding channel of Little River. This water split into overflow channels and flooded wide areas during the period of heavy rainfall. These overflow channels were really broad stretches of lowland with more or less clearly defined channel beds which meandered through them and were marked by sedge grass growing in open water. Only the ridges and highlands could be cleared and cultivated.

On the west, the St. Francis River, in the same way, brought down volumes of water from the hills into the lowlands, meandering its course southward, to pass through the lower end of Crowley Ridge

and break up into many overflow channels or "sloughs," flooding the country periodically during periods of heavy rainfall, holding back lumbering operations and agricultural development, and causing Dunklin County untold losses.

#### DRAINAGE AND CLEARING.

With the realization of the great agricultural value of these overflow bottom lands, the possibility of reclamation by land drainage came to be considered. Drainage enterprises were organized and operations were begun. About 1894 the first dredge in southeast Missouri commenced work. Up to 1900 only 250 miles of ditches for drainage purposes are recorded for the whole State. Between 1900 and 1920, more than 3,600 miles of ditches were constructed. Most of these were from 20 to 70 feet in width and 6 to 12 feet deep. During the same period, 518 miles of levees were built as cooperative enterprises. More than two-thirds of the area in these drainage enterprises is in the seven counties under consideration. The investment involved was something over fifteen millions of dollars.

The largest and most important of these drainage operations was the Little River drainage district. By the construction of two huge ditches running eastward just below Cape Girardeau, all of the water coming down from the Cape Hills on the north, which had formerly been discharged into the Whitewater, the principal tributary of Little River, was intercepted and discharged directly into the Mississippi. A system of main ditches and laterals was then constructed extending down the entire course of the Little River overflow, finally to be gathered into three trunk ditches which run southwest into Arkansas and discharge into Big Lake.

Through the formation of this and many smaller drainage districts and the building of levees to take care of the flood waters, this great area of bottom land was dewatered. It is being deforested at a rapid pace. The timber remaining is being rapidly cut off; great sawmills at Morehouse, Gideon, Kennett, and other places are making gigantic inroads on it. Behind the lumberman comes the agriculturist, planting corn around the tree stumps in a little clearing, extending his operations and completing the clearing; one clearing gradually joining another, until huge tracts of rich farm lands—in one of the richest agricultural sections of the world—stand to-day where a few years ago there was only a forested morass.

#### POPULATION.

Thirty years ago, this lowland had a mere sprinkling of population, settled here and there on the ridges away from the reach of the floods and away from the then dreaded "miasms" of the swamps. Some

idea of the growth of the population may be gained from the following tabulation:

County.	Per cent increase in population—			Population per square mile, 1920.
	1890 to 1900.	1900 to 1910.	1910 to 1920.	
Butler.....	65	23	17	35
Dunklin.....	44	40	8	62
Mississippi.....	17	23	12	31
New Madrid.....	21	73	29	39
Pemiscot.....	103	61	36	58
Scott.....	17	71	5	56
Stoddard.....	42	13	27	37

### MALARIA.

Malaria has always been a considerable problem in these lowlands of southeast Missouri. "Swamp fever," "blackwater fever," and "congestive chills" were of common occurrence. They held back the settlement of the country; families would spend a season or two in this country and then go back to the hills to get rid of their "chills." As drainage and clearing progressed, however, according to the testimony of old settlers, and physicians who have practiced there for many years, the prevalence and severity of malaria decreased. Unfortunately there are no mortality statistics which go back far enough to definitely establish this point. Some indication of what has happened can be gained from a consideration of the following table showing the malaria death rate during the past nine years:

*Death rate per 10,000 population from malaria in seven counties of southeast Missouri, 1913-1921.*

County.	1913	1914	1915	1916	1917	1918	1919	1920	1921
Butler.....	26.5	18.5	5.3	16.2	13.8	7.2	6.7	8.3	5.8
Dunklin.....	33.3	36.0	22.6	23.2	16.5	21.2	10.5	8.3	11.6
Mississippi.....	12.0	6.5	4.4	4.4	6.0	2.3	3.1	7.1	2.3
New Madrid.....	17.4	16.1	7.5	8.6	7.6	3.7	2.0	2.8	2.4
Pemiscot.....	22.8	19.1	14.6	12.6	16.6	11.4	4.1	3.0	4.5
Scott.....	13.1	15.0	5.7	7.8	3.9	2.1	2.6	.4	1.7
Stoddard.....	22.3	13.6	11.1	9.0	14.0	7.5	5.7	2.7	5.7

It is evident from this table that the malaria in southeast Missouri has undergone a considerable reduction during the period for which we have statistics. It is evident, at the same time, that there is still a considerable malaria problem in spite of the extensive drainage and clearing that has been effected—a problem sufficiently great to warrant careful study before attempting the inauguration of a well-directed effort at complete control.

## II. A STUDY OF MALARIA PREVALENCE AND SOME OF THE FACTORS AFFECTING IT IN THE SIKESTON AREA OF SOUTHEAST MISSOURI.

By M. V. Ziegler, Passed Assistant Surgeon, and K. F. Maxey, Assistant Surgeon, United States Public Health Service.<sup>1</sup>

During the early part of 1921, through the cooperation of the Missouri State Board of Health, the International Health Board, and the United States Public Health Service, an intensive study of the prevalence of malaria and of the social and economic factors affecting it in the rural districts of southeast Missouri, was undertaken. After a reconnaissance survey had been made, an area was selected which was thought to be fairly representative of the rural conditions in this section of the State. Its location is shown upon the accompanying map and is seen to be the country adjacent to Sikeston, including small portions of Stoddard, Scott, New Madrid, and Mississippi Counties. A plot 24 miles east and west by 12 miles north and south was originally blocked off for the study. This area was divided into two equal parts by a line drawn east and west, the northern half of which was to be studied by Dr. Mark Boyd, of the International Health Board, and the southern half to be studied by Dr. Mark Ziegler, of the United States Public Health Service. The towns of Morehouse and Sikeston were not included.

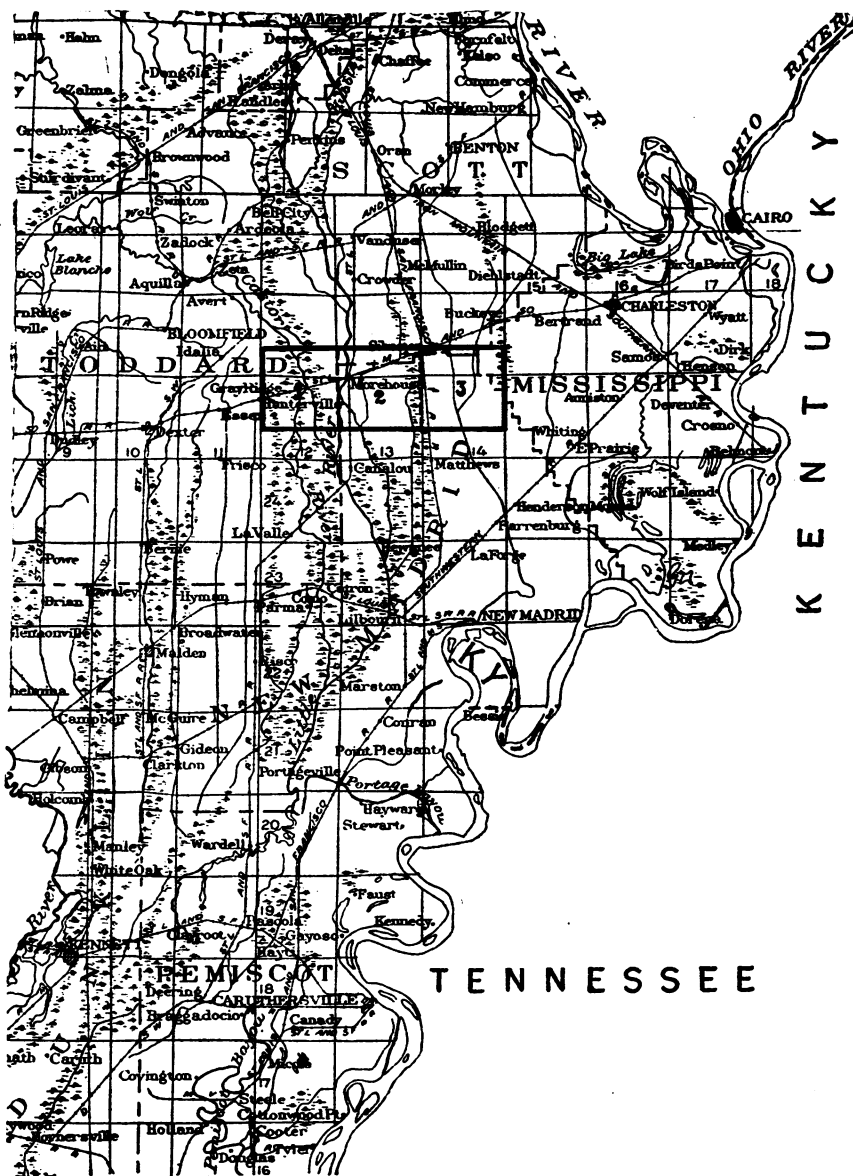
The report here presented is based upon the field work of Doctor Ziegler in the area, which, for the sake of convenience, will be designated as the "Sikeston area." Three of the four units of this area were completely covered; in other words, the strip 18 miles wide and 6 miles long, shown on the map as districts 1, 2, and 3.

### METHOD OF STUDY.

The data were secured by house-to-house visits and were recorded on a detailed epidemiological form a copy of which is shown herewith. To determine the extent of prevalence of malaria, main dependence was placed on the history of clinical attacks. When the opportunity was favorable, this history was supplemented by an examination for splenic enlargement in the case of children, and a blood smear was made. These blood smears were examined in the laboratory of the Missouri State Board of Health.

---

<sup>1</sup> The epidemiological observations in the field were made by Doctor Ziegler; the notes were compiled by Doctor Maxey.



Map showing location of area studied by house to house canvass, with reference to counties of southeast Missouri.



[REVERSE.]

Time losses from malaria, 1921: Those ill..... Value..... In nursing..... Value.....  
 Crop losses from malaria.....  
 Cash outlay required by malaria.....

Site: Elevated ground.....  
 Structure..... Stories..... Kitchen: Attached..... Detached..... Screened.....  
 Gallery: Full length..... Width..... Elevation of house..... Chain wall..... On pillars.....  
 No. rooms..... No. with beds..... No. beds..... Bars used.....  
 No. screened rooms..... Condition of screens: Doors..... Windows.....  
 Fire places: No..... Location.....  
 Used for cooking..... Flue screened.....  
 Construction of house: Floors..... Walls.....  
 Ceilings..... Height of ceilings.....  
 Yard: Water barrels..... Cistern..... Open well.....  
 Troughs..... Ditches..... Vegetation: Weeds, shrubbery, trees.....  
 Mosquito larvae observed.....  
 Domestic animals sheltered under or near house..... Privy..... Type.....

## OBSERVATIONS ON ANOPHELINES.

Collections made from..... Time spent.....  
 No. collection.....

Species.	Male.	Female.	Total.	No. engorged.
A. quadrimaculatus.....				
A. punctipennis.....				
A. crucians.....				

Nearest important breeding places.....

## RELATION OF MALARIA TO AGRICULTURE.

Occupant: Owner..... Tenant..... Farm hand.....  
 Size farm..... Acres under cultivation.....  
 Acres in different crops..... Pasture.....  
 Topography.....  
 Character of soil.....  
 Uncultivated land: Native timber..... 2nd growth..... Meadow.....  
 Subject to overflow..... Ditches..... Tiling.....  
 Reclaimed land: Levee protection.....  
 Surface water: Permanent: Streams: Sluggish..... Rapid.....  
 Ponds..... Swamps..... Marsh..... Borrow pits.....  
 Bayou..... Temporary.....  
 Anopheline breeding.....

Habits after nightfall: Rest..... Recreation.....  
 Church..... Work.....  
 Economic status..... Work habits.....

## NOTES.

Concerning the error of basing figures of malaria prevalence on a "history index," a few words are necessary. This is not the proper place for an extended discussion of the difficulties of securing accurate figures upon malaria prevalence. Suffice it to say that it is not possible to measure the absolute amount of malaria in a given territory; one must be content to apply a yardstick, as it were, to gain some idea of the prevalence of the disease, and then if it is desired



to compare this territory with another, the same yardstick or unit of measure must be used. The chief drawback to the "history index" is that to a large extent the figures are influenced by the personality of the individual who obtains the index. Every doctor has his own opinion of just what constitutes a positive malaria history, what questions to ask, and how much credence to place in the replies. Again, his results will depend largely upon his ability to get the cooperation and confidence of the person interrogated, so that his replies may be truthfully and accurately given to the best of his or her ability. And finally, it must be remembered that the history of malaria, although usually obtained from the father or mother, when either are available at the time of the visit, may be obtained from a child or the hired help, if no one else is at home.

For these and other reasons there must of necessity be a large primary error in the method, and the figures which are obtained must be used with this in mind. Too much reliance must not be placed in small differences. The figures should be used only as an *index* and not as a measure of the absolute amount of malaria in a given territory. Finally, it would be unsafe to draw inferences from the comparison of figures obtained by one observer with those obtained by another observer working in a different area. On the other hand, figures obtained in one district would seem to be fairly comparable with those from another when obtained *by the same observer* in both instances. Use has been made of this fact in the present study by dividing the area into three districts, which are compared with each other as regards the several factors bearing upon the prevalence of malaria.

The items in the questionnaire relating to direct economic loss due to malaria proved to be of questionable value. The account of illness given by the individual was usually vague. Often it was simply a statement that "John was chilling for a week or more," or "John had some chills," and it was impossible to determine how much time the individual actually lost from work or how much medicine he actually consumed. These questions were abandoned early because it was not felt that the data they yielded were sufficiently accurate in dealing with this particular population group in this region.

#### ANALYSIS OF DATA.

In the whole area, a total of 407 houses were visited, or about 90 per cent of the homes actually included. In these were living 1,936 white persons, or an average of 4.8 per household. Of these persons, 165, or about 9 per cent, gave histories of having had malaria in 1920, and 285, or about 15 per cent, gave histories of having had malaria in 1921.

The difference in rate between the two years is no doubt partly due to the fact that attacks of malaria during the current year were better remembered than those of the preceding year. The figure for 1921 means that one person in every six or seven had an attack of malaria during the year.

This history rate was supported by the examination of 54 blood smears. Of these, 23, or 42.6 per cent, were reported positive for parasites, 21 tertian, and 2 æstivoautumnal.

The sex distribution of the positive histories is not particularly significant. In 1920 the attack rate among males was 8.7; among females, 8.3. In 1921 the attack rate among males was 15.6; among females 13.6. It would seem from this that men and boys in this district have a slightly higher incidence, which is probably explained by greater exposure to mosquito bites on account of bolder habits.

The age distribution of the positive histories is shown in Table 1. Maximum incidence is shown in the age group 5 to 19, with a slowly declining rate in later life. The high incidence in early life during the school period is a significant fact which has been generally confirmed. The lowered incidence in later life is generally attributed to the acquisition of a sort of immunity or tolerance on the part of old inhabitants who have had repeated attacks of malaria.

TABLE 1.—*Attack rate in different age groups, based upon positive histories of malaria for 1920 and 1921, Sikeston, Mo., area.*

Age group.	Number of persons exposed.	1920.		1921.	
		Positive history.	Rate per 100.	Positive history.	Rate per 100.
0-4.....	289	9	3.1	24	8.3
5-9.....	282	24	8.5	58	20.6
10-14.....	263	36	13.7	48	18.3
15-19.....	232	18	7.8	44	19.0
20-29.....	263	21	8.0	39	14.8
30-39.....	238	19	8.0	26	10.9
40-49.....	182	16	8.8	23	12.6
50-69.....	237	19	8.0	20	8.5
70 and over.....	20	2	10.0	2	10.0
	1,936	165	8.5	284	14.7

#### SCREENING.

The screening of each house visited was examined and roughly classified as "Good," "Fair," "Poor," and "None." By the term "Good" was meant those houses with completely screened doors and windows, the screening being in good condition and rendering the house practically "fly proof," if not "mosquito proof." Under "Fair" were included those houses which had been screened, but the screening of which was in bad condition, affording only a partial protection against flies and almost no protection against mosquitoes. Under "Poor" were included the houses which were incompletely

screened and the screening of which was in very poor condition, affording very little protection against flies or mosquitoes. In the table, "Fair" and "Poor" are grouped together, since the classifications are not significantly different.

In Table II is shown the attack rate in households with various degrees of screening, from no screening at all to a reasonably well-screened or "fly-proof" house. In the houses with good screening the attack rate was 9 per 100 persons exposed; in the fairly or poorly screened houses the rate was 16 per 100; and in the houses which had no screens at all the rate was 18 per 100 persons exposed. These differences would seem to be sufficiently great to be of definite significance as indicating that partial protection is afforded by proper screening. In this area the attack rate in houses well screened is one-half as great as that in houses which have no such protection.

TABLE II.—*Malaria attack rate in houses well screened as compared with houses with poor or no screening.*

Screening.	Number of households.	Number of persons exposed.	Persons per household.	Number of persons attacked by malaria in 1921.	Attack rate per 100 in 1921.
Good.....	112	513	4.6	45	8.8
Fair or poor.....	147	714	4.9	111	15.6
None.....	144	698	4.8	127	18.2
Total.....	403	1,925	4.8	283	14.7

TABLE III.—*Malaria attack rate in houses of tight construction as compared with houses of open frame or log construction, holding the screening factor constant. (Based on history index.)*

Screening.	Malaria attack rate per 100 persons exposed, 1921.	
	In houses of tight construction.	In houses of open frame or log construction.
Good.....	8.6	13.6
Fair or poor.....	15.3	16.4
None.....	21.6	16.7

TABLE IV.—*Malaria attack rate among owners as compared with tenants and farm hands.*

	Number of households.	Number of persons exposed.	Number of persons attacked by malaria in 1921.	Attack rate per 100 persons exposed.
In houses occupied by owners.....	62	261	26	10
In houses occupied by farm hands or tenants.....	341	1,668	257	15

## HOUSING.

The effectiveness of screening is markedly dependent upon the character of construction of the house. When the house is weather-boarded, with tight-fitting flooring, ceiled walls, and ceilings, it is obviously more completely protected by good screening than is the house built of logs, with chinks and crannies, loose board floors, and no ceilings, and with a loft above which affords a hiding place for mosquitoes during the day. It is not surprising to find, then, that the attack rate in houses which are tightly constructed is 14 per 100 exposed as compared with 17 per 100 in houses of the more primitive loose construction. This difference may not be due entirely to the construction per se, however, because, as an actual fact, 42 per cent of the tightly constructed houses were well screened as compared with 3.4 per cent of the open frame houses, and it is likely that the screening is the more important factor.

To examine this point more closely, Table III was prepared, showing that in spite of good screening the rate is appreciably higher in houses with open frame or log construction than in houses tightly constructed. It is only fair to qualify this statement, however, by mentioning the fact that in the openly constructed houses one is more likely to find the family low in the economic scale, large families living in a single room, inadequately treated when sick, poorly clothed, and poorly fed—all factors tending to cause increased malaria incidence.

The influence of these factors is indicated in Table IV, which shows that the incidence of malaria among families who own their own farms (and are consequently higher up in the economic scale) is 10 per 100, as compared with 15 per 100 for the families of tenants and farm hands.

## COMPARISON OF THE THREE DISTRICTS.

In the introductory paragraphs it was explained that districts Nos. 1, 2, and 3 were roughly representative of the changing conditions of life in southeast Missouri (see map). District No. 1 represents the conditions of pioneer life among the woodsmen and first settlers in the Little River Swamp, which is now being drained and cleared; district No. 2 represents the conditions of permanent settlement in a comparatively new country, which was cleared and drained some 5 or 10 years previously; and district No. 3 represents the conditions of very old settlements on Sikeston Ridge. On comparing the history rate of the three districts as given for 1921, it is found that in district No. 1 the attack rate was 12 per 100 persons exposed; in district No. 2, 19; and in district No. 3, 14. The low figure for district No. 1 is possibly due to an error in the method. The field

work started in district No. 1 in the latter part of August and was finished about September 20. The figures for this district really represent only the first eight and one-half months of the year and do not include the considerable number of cases that occurred between September 20 and December 15. The figures for district No. 2 represent the malaria which occurred up to approximately the 1st of November; while those of district No. 3 include the cases up to the middle of December.

On this account, for purposes of comparison, the malaria index of the preceding year (1920) is probably more reliable. This shows the following attack rates:

TABLE V.—*Relative attack rate per 100 persons exposed in each of the three districts, based on histories of malaria in 1920.*

District No.—	Number of persons exposed.	Number giving history of malaria in 1920.	Attack rate per 100 persons exposed in 1920.
1.....	733	111	15.1
2.....	533	36	6.7
3.....	670	18	2.8

While the attack rates shown in Table V may be low in absolute value, the relative values for the three districts should be approximately correct. The figures represent the same time interval—one year—and any error due to faulty memory should be about the same for each district. The highest incidence is shown in district No. 1, the lowest in No. 3. This may be taken as probably representing the true state of affairs. This difference in incidence of malaria in the three districts is chiefly due to variation with regard to—

- (a) Production of anopheline mosquitoes;
- (b) Protection from bites of mosquitoes by screening and housing;
- (c) Character of population.

#### (A) PRODUCTION OF ANOPHELINE MOSQUITOES.

The miles of drainage ditches per acre of land is greatest in the first district; the second comes next in this regard; and, finally, the third district is largely on the high, dry land of Sikeston Ridge. The first district is still largely wooded; it has been recently drained. It is still quite wet in spots, particularly after a heavy rainfall, and there are still many small pools scattered about. In this district, anopheline larvæ are found in the old channels of the Castor and Little Rivers, in certain of the drainage ditches (those carrying a

small amount of water in which vegetation has grown up and more or less flottage accumulated), and in some of the wet-weather pools left outside the ditches. The second district is almost completely drained and cleared. The production of anopheline mosquitoes is practically confined to the smaller drainage ditches of the type described above. In the third district production is limited principally to the grassy margins of the drainage ditches. *Gambusia affinis*, the common top-minnow, abounds in all three districts. The mosquito larvæ can survive its active patrol only where adequate protection by vegetation is afforded.

Concerning the adult mosquitoes found, *Anopheles quadrimaculatus* is by all odds the predominating mosquito during the malaria season. Occasionally *A. punctipennis* is encountered, but never in sufficient numbers to be of significance as a vector. During the course of this investigation, in July, August, and September, *A. quadrimaculatus* was found in or about 20 out of 60 homes where a brief search was made. As one leaves the Little River Valley and approaches Sikeston Ridge, it becomes increasingly difficult to find adult anophelines. Their distribution on the high land is extremely "spotty," and the density much less than in the lowland.

#### (B) PROTECTION FROM MOSQUITOES.

The following tabulation brings out the relative amount of screening in the three districts:

District No. 1: 28 per cent of the houses had reasonably good screening.

District No. 2: 34 per cent of the houses had reasonably good screening.

District No. 3: 22 per cent of the houses had reasonably good screening.

The poor screening in the last-named district, representing the very old civilization of Sikeston Ridge, is a function of two factors: First, the population is largely of a tenant class; and, second, there is a fairly low mosquito nuisance. On the other hand, the families in the swamps are almost forced to put up some sort of a screening on account of the mosquito pests, aside from all ideas of affording protection from malaria.

In regard to the housing conditions, the following are the ascertained facts:

District No. 1: 41 per cent of the houses are tightly constructed.

District No. 2: 72 per cent of the houses are tightly constructed.

District No. 3: 82 per cent of the houses are tightly constructed.

In other words, 60 per cent of the houses in district No. 1 were open-frame or log construction, as compared with less than 20 per

cent in district No. 3. Housing conditions react in another way. It has been noted above that in 1920, 165 cases, and in 1921, 284 cases occurred in 407 households. There were many families which had more than 1 case each, as indicated on the following tabulation:

Cases per household.	1920	1921
One.....	49	93
Two.....	20	38
Three.....	9	13
Four.....	6	7
Five.....	1	5
Six.....	2	2
Seven.....	1	1

In malaria one can not speak of a "secondary attack rate" in the same sense in which it is used in the acute communicable diseases transmissible by direct contact, such as diphtheria and scarlet fever. Information is seldom complete enough to state definitely whether the infection originated in this same house or from some neighboring house. It has been demonstrated experimentally<sup>1</sup> that a single infected mosquito may give the parasite to several persons by successive bites. It is, therefore, clear that conditions which would tend to make this possible would tend to increase the malaria rate. For this, and other reasons, wherever conditions are such that a large family sleeps crowded together in a single room, the chances are good that if one is infected the others will become so. It is common experience in school examination to find two or three boys with enlarged spleens in a room of 30 or 40, and then discover that they are brothers. In district No. 1, owing to primitive living conditions, it is not infrequently the case that a family of five or more persons will occupy a single bedroom. This condition of affairs is much less frequently found in the other two districts.

From these data it would appear that, although the screening is slightly more extensive in the first district, greater concentration of anopheline mosquitoes and poor housing and living conditions render mass biting and mass infection relatively more easy in this than the other districts.

### (c) CHARACTER OF POPULATION.

In studying the character of the population of the three districts, it is to be noted that the population of district No. 1 consists chiefly of lumberjacks and pioneering woodsmen, with a scattering of farmers; in districts No. 2 and No. 3 the bulk of the population is

<sup>1</sup> Mitzmain, M. Bruin: *Anopheles Infectivity Experiments*. Public Health Reports, vol. 31, No. 35, Sept. 1, 1916, pp. 2325-2335. (Reprint No. 359.)

tenant farmers. The relative mobility of the three groups is indicated by the following tabulations:

District No. 1: 72 per cent have lived in present location not more than 2 years.

48 per cent have lived in present location not more than 1 year.

District No. 2: 63 per cent have lived in present location not more than 2 years.

49 per cent have lived in present location not more than 1 year..

District No. 3: 54 per cent have lived in present location not more than 2 years.

41 per cent have lived in present location not more than 1 year.

The 72 per cent who have lived in district No. 1 for not more than 2 years are practically all families who have moved from the surrounding country into this new lumbering and farming district which has been opened up by the drainage of Little River Swamp. Only a few can be said to have come from nonmalarious sections. The vast majority have been recruited from near-by parts of southeast Missouri and from Arkansas. They do not constitute a new non-immune population, therefore, but doubtless had many carriers of malaria among them when they went into this country.

On the other hand, in districts No. 2 and No. 3 the figures do not represent newcomers so much as they do a shifting tenant-farmer population.

The land in districts No. 2 and No. 3 is owned by a few large landholders and is farmed in small tracts by tenant farmers. The percentage of farmers owning the farm on which they lived at the time of the study was as follows: District No. 1, 21 per cent; district No. 2, 16 per cent; district No. 3, 8 per cent. Large numbers of the tenant farmers change their location, seeking more fertile farm lands or seeking more satisfactory conditions of tenure each year. They shift from one farm land to another, often traveling in "prairie schooners" like the early pioneers of this country. In addition, there is an influx of "cotton pickers" in the fall, coming chiefly from the "hill country." They camp out to a great extent in any available shelter and are, of course, easy prey for either infective or noninfective mosquitoes.

To summarize the comparison of the three districts, it is evident from the foregoing data that malaria is more prevalent in the first district, because of greater production and concentration of anopheline mosquitoes, because of greater opportunity for mass biting and because of the character of its population.



## DISCUSSION.

From consideration of the data yielded by this house-to-house canvass (history index) of malaria prevalence, it would seem that malaria is still a considerable public-health problem in this section of southeast Missouri, although the construction of drainage ditches has apparently reduced the incidence of the disease in recent years. The chief problem still seems to center in the wooded (uncleared) district along the flood plain of Little River and becomes less significant as one approaches the ridge or hill country. The highest incidence is in district No. 1, where 15 per cent or more of the people had malaria each year. Owing to the mobility of the tenant population, it is not unlikely that a considerable number of the persons having malaria in the hill section are persons infected in the lowlands, relapsing in their new location.

Several factors contribute to the high incidence. Although the water has been largely confined to drainage ditches, some of these ditches produce anopheline mosquitoes in quantity. The density of this vector, although considerably reduced by drainage systems, is still sufficiently great in many localities to act efficiently in transmitting and propagating the disease. Screening, housing, and general living conditions among the tenant class of farmers, and particularly among the pioneers who are cutting off the timber and clearing the reclaimed land, are such as to afford small protection to the class involved.

One of the most important economic factors concerned is the migratory habit of the small tenant farmer and farm hand. This migration reacts to the detriment of the section in many ways. So far as malaria is concerned it is to be noted that—

(a) The average tenant or farm hand does not look upon his house as being his own home. He has no pride of ownership, and no desire to improve the property and make it safe and comfortable. He is usually unwilling to buy or even properly maintain screens. The owner, on the other hand, has learned through experience that his property will not be properly cared for and is unwilling to invest money in improvements on which he may expect no return.

(b) The shifting character of the tenant population tends to discourage adequate medical attention. There is no "family doctor." Most of these tenants are poor, and their credit is not good. They are reluctant to call a doctor; the doctor is reluctant to go when called. The result is "self-medication." "Chills and fever" are treated with "chill tonics" containing an entirely insufficient amount of quinine to effect a permanent cure. Probably a large percentage of the persons infected become chronic carriers.

(c) These chronic carriers are constantly being shifted about to new locations. The tendency is for a family to spend a year or two in the more fertile reclaimed bottom lands, then move back to the hill country to get rid of the "chills." Thus the malaria plasmodium is seeded about and the "sporadic" cases occur, giving rise to small foci here and there that might otherwise not occur.

This migratory habit of the tenant farmer and farm hands is undoubtedly a great obstacle in the way of reduction of malaria. It discourages local projects for the control of anopheline breeding, it discourages adequate screening, and it discourages adequate medical attention. As the country grows older and "settles down," it is reasonable to expect a greater proportion of the farmers eventually to own their farms, and a population of more stable character may be developed.

At present, efforts to reduce malaria morbidity should center chiefly about the individual home and the school. The people must be educated as to the rôle of the mosquito in transmission and its life history and habits; also how properly to screen their homes and the value of keeping them tightly screened, and how to "hand-catch" the adults that rest in bedrooms by day. Some provision for more adequate medical attention must be made. Quinine must be popularized in place of the inadequate "chill tonics," and the "standard treatment" should be introduced in order to diminish the percentage of "carriers."

---

## INFLUENZA IN THE UNITED STATES.

CASES REPORTED BY STATES FOR THE FIRST FIVE WEEKS OF THE YEARS 1921, 1922,  
AND 1923.

The following table shows the number of cases of influenza reported by State health officers for the first five weeks of the year 1923, compared with similar reports for the corresponding weeks of the years 1922 and 1921.

A similar table, which includes the last two weeks of the year 1922, will be found on page 64 of the Public Health Reports dated January 12, 1923.

*Cases of influenza reported weekly by telegraph by State health officers, December 31, 1922, to February 3, 1923 (inclusive), and corresponding weeks of 1922 and 1921.*

State and year.	First week.	Second week.	Third week.	Fourth week.	Fifth week
<b>New England division:</b>					
Maine—					
1923.....	10	6	4	25	36
1922.....	5	9	18	14	97
1921.....	18	6	14	7	1
Vermont—					
1923.....	1				1
1922.....		1		1	7
1921.....	5	1	2	3	6
Massachusetts—					
1923.....	59	162	138	131	...
1922.....	7	12	18	66	398
1921.....	37	63	39	15	17
Connecticut—					
1923.....	22	50	43	120	159
1922.....	5	7	9	22	109
1921.....	13	14	13	13	8
<b>Middle Atlantic division:</b>					
New York (except New York City)—					
1923.....	136	187	212	408	688
1922.....	28	48	80	173	694
1921.....	86	109	96	79	43
New York City—					
1923.....	67	143	169	444	983
1922.....	56	57	110	1,230	5,731
1921.....	134	78	84	72	59
New Jersey—					
1923.....	30	40	47	138	258
1922.....	28	36	40	126	426
1921.....	34	26	22	33	32
<b>East North Central division:</b>					
Indiana—					
1923.....				63	210
Illinois—					
1923.....	76	87	168	350	725
1922.....	25	49	38	125	108
1921.....	42	18	27	19	28
Wisconsin—					
1923.....	92	47	69	174	247
1922.....	46	17	59	22	24
1921.....	64	81	44	43	25
<b>West North Central division:</b>					
Minnesota—					
1923.....			1		2
1922.....	1	2			8
1921.....			1	6	
Missouri—					
1923.....		462	808		583
1922.....	7	16	8	20	71
1921.....	51	48	40	43	26
South Dakota—					
1923.....				2	1
1922.....				1	
1921.....	2			5	
Nebraska—					
1923.....	16	39	23	38	38
1922.....					6
1921.....	3	4	1	1	9
Kansas—					
1923.....	19	14	38	225	576
1922.....	9	23	88	121	364
1921.....	13	9	13	29	5
<b>South Atlantic division:</b>					
Delaware—					
1923.....		25		38	25
1922.....			5	2	7
1921.....	9	12	12	4	2
Maryland—					
1923.....	133	318	547	1,602	2,171
1922.....	21	40	52	93	110
1921.....	70	79	82	107	125
District of Columbia—					
1923.....	3	26	67	100	46
1922.....	1	3	6	7	5
1921.....	2	2	2	4	4
West Virginia—					
1923.....	656	188	285	192	121

*Cases of influenza reported weekly by telegraph by State health officers, December 31, 1922, to February 3, 1923 (inclusive), and corresponding weeks of 1922 and 1921—Con.*

State and year.	First week.	Second week.	Third week.	Fourth week.	Fifth week.
<b>South Atlantic division—Continued.</b>					
South Carolina—					
1923.....	2, 277	1, 842	.....	.....	.....
Georgia—					
1923.....	872	885	744	729	1, 008
1922.....	21	19	52	64	74
1921.....	30	24	26	25	37
Florida—					
1923.....	56	87	71	100	159
1922.....	3	6	21	6	15
1921.....	6	3	4	10	3
<b>East South Central division:</b>					
Kentucky—					
1923.....	731	958	1, 376	.....	.....
1922.....	17	25	16	51	332
1921.....	10	8	40	19	33
Alabama—					
1923.....	503	2, 152	1, 181	1, 681	719
1922.....	2	.....	5	3	26
Mississippi—					
1923.....	3, 048	2, 550	7, 443	5, 453	5, 025
<b>West South Central division:</b>					
Arkansas—					
1923.....	112	875	3, 446	2, 415	2, 007
1922.....	83	40	64	88	192
1921.....	63	78	75	37	52
Louisiana—					
1923.....	24	12	54	501	555
1922.....	7	8	4	8	10
1921.....	39	.....	.....	10	.....
Texas—					
1923.....	70	76	237	390	1, 637
1922.....	48	.....	5	5	57
1921.....	39	24	.....	.....	9
<b>Mountain division:</b>					
Colorado (exclusive of Denver)—					
1923.....	.....	1	.....	3	3
1922.....	.....	.....	3	2	4
New Mexico—					
1923.....	1	36	11	32	48
1922.....	.....	.....	1	.....	10
1921.....	.....	.....	.....	2	1
<b>Pacific division:</b>					
Oregon—					
1923.....	1	.....	.....	30	18
1922.....	.....	.....	.....	7	31
California—					
1923.....	19	42	139	176	177
1922.....	38	.....	28	48	92
1921.....	22	23	30	37	.....

## Examination for Entrance Into the Regular Corps of the Public Health Service.

Examinations of candidates for entrance into the Regular Corps of the United States Public Health Service will be held at the following-named places on the dates specified:

Chicago, Ill., March 12, 1923.

San Francisco, Calif., March 12, 1923.

Washington, D. C., March 12, 1923.

Candidates must be not less than 23 nor more than 32 years of age, and they must have been graduated in medicine at some reputable medical college and have had one year's hospital experience or two years' professional practice. They must pass satisfactory physical, academic, and professional examinations before boards of commissioned medical officers.

Successful candidates will be recommended for appointment by the President, with the advice and consent of the Senate.

Requests for information or permission to take this examination should be addressed to the Surgeon General, United States Public Health Service, Washington, D. C.

## DEATHS DURING WEEK ENDED JANUARY 27, 1923.

*Summary of information received by telegraph from industrial insurance companies for week ended January 27, 1923, and corresponding week of 1922. (From the Weekly Health Index, January 30, 1923, issued by the Bureau of the Census, Department of Commerce.)*

	Week ended Jan. 27, 1923.	Corresponding week, 1922.
Policies in force.....	51, 932, 611	48, 706, 556
Number of death claims.....	10, 899	9, 153
Death claims per 1,000 policies in force, annual rate.....	10. 9	9. 8

*Deaths from all causes in certain large cities of the United States during the week ended January 27, 1923, infant mortality, annual death rate, and comparison with corresponding week of 1922. (From the Weekly Health Index, January 30, 1923, issued by the Bureau of the Census, Department of Commerce.)*

City.	Estimated population July 1, 1923.	Week ended Jan. 27, 1923.		Annual death rate per 1,000, corre- sponding week 1922.	Deaths under 1 year.		Infant mor- tality rate, week ended Jan. 27, 1923.*
		Total deaths.	Death rate. <sup>1</sup>		Week ended Jan. 27, 1923.	Corre- sponding week 1922.	
Total.....	28, 703, 637	8, 421	15. 3	13. 7	1, 076	962	.....
Albany, N. Y.....	117, 375	52	23. 1	11. 2	7	4	155
Atlanta, Ga.....	222, 963	76	17. 8	14. 5	8	7	.....
Baltimore, Md.....	773, 580	282	19. 0	15. 5	35	34	103
Birmingham, Ala.....	195, 901	57	15. 2	11. 7	5	6	.....
Boston, Mass.....	770, 400	295	20. 0	15. 4	53	35	152
Bridgeport, Conn.....	* 143, 555	42	15. 3	12. 4	5	10	69
Buffalo, N. Y.....	536, 718	177	17. 2	13. 3	23	25	96
Cambridge, Mass.....	111, 444	35	16. 4	12. 7	3	8	53
Camden, N. J.....	124, 157	43	18. 1	14. 5	4	3	66
Chicago, Ill.....	* 2, 833, 288	705	13. 0	11. 0	105	85	.....
Cincinnati, Ohio.....	406, 312	165	21. 2	18. 7	17	9	112
Cleveland, Ohio.....	877, 992	191	11. 3	9. 6	27	22	74
Columbus, Ohio.....	261, 082	88	17. 6	14. 0	6	6	62
Dallas, Tex.....	177, 274	52	15. 3	17. 0	12	8	.....
Denver, Colo.....	272, 031	96	18. 4	18. 9	15	10	.....
Detroit, Mich.....	* 993, 678	270	14. 2	10. 9	43	53	86
Duluth, Minn.....	106, 289	20	9. 8	.....	4	.....	91
Erie, Pa.....	112, 571	24	11. 1	7. 6	2	1	41
Fall River, Mass.....	120, 912	34	14. 7	13. 8	5	6	71
Flint, Mich.....	117, 968	34	15. 0	.....	4	.....	79
Fort Worth, Tex.....	125, 021	24	10. 0	7. 3	5	3	.....
Grand Rapids, Mich.....	145, 947	37	13. 2	8. 7	1	5	16
Houston, Tex.....	154, 970	30	10. 1	12. 9	6	7	.....
Indianapolis, Ind.....	340, 882	118	18. 0	15. 5	15	12	115
Jacksonville, Fla.....	100, 046	43	22. 4	16. 6	3	5	.....
Jersey City, N. J.....	309, 034	35	14. 3	16. 2	11	16	74
Kansas City, Kans.....	115, 781	42	18. 9	17. 4	9	4	206
Kansas City, Mo.....	351, 819	117	17. 3	19. 1	15	21	.....
Los Angeles, Calif.....	666, 853	192	15. 0	17. 5	21	15	79
Louisville, Ky.....	257, 671	109	22. 1	16. 0	15	10	162
Lowell, Mass.....	115, 089	46	20. 8	17. 8	10	9	171
Lynn, Mass.....	102, 683	36	18. 3	.....	6	.....	153
Memphis, Tenn.....	170, 067	95	29. 1	19. 6	15	10	.....
Milwaukee, Wis.....	484, 595	105	11. 3	10. 0	13	14	65

<sup>1</sup> Annual rate per 1,000 population.

<sup>2</sup> Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1922. Cities left blank are not in the registration area for births.

<sup>3</sup> Enumerated population Jan. 1, 1920.

<sup>4</sup> Estimated population July 1, 1922.

*Deaths from all causes in certain large cities of the United States during the week ended January 27, 1923, infant mortality, annual death rate, and comparison with corresponding week of 1922. (From the Weekly Health Index, January 30, 1923, issued by the Bureau of the Census, Department of Commerce)—Continued.*

City.	Estimated population July 1, 1923.	Week ended Jan. 27, 1923.		Annual death rate per 1,000, corresponding week 1922.	Deaths under 1 year.		Infant mortality rate, week ended Jan. 27, 1923.
		Total deaths.	Death rate.		Week ended Jan. 27, 1923.	Corresponding week 1922.	
Minneapolis, Minn.....	409,125	76	9.7	10.3	6	9	33
Nashville, Tenn.....	121,128	64	27.6	12.6	5	2	.....
New Bedford, Mass.....	130,072	49	19.6	10.6	12	7	179
New Haven, Conn.....	172,967	80	24.1	18.1	12	5	156
New Orleans, La.....	404,575	159	20.5	17.1	16	11	.....
New York, N. Y.....	5,927,625	1,470	12.9	13.6	192	217	77
Bronx Borough.....	840,544	183	11.4	11.0	23	14	81
Brooklyn Borough.....	2,156,687	457	11.0	12.2	53	91	58
Manhattan Borough.....	2,267,001	667	15.3	16.5	91	90	88
Queens Borough.....	535,844	119	11.6	10.5	19	18	102
Richmond Borough.....	127,549	44	18.0	15.5	6	4	109
Newark, N. J.....	438,699	109	13.0	13.6	15	19	70
Norfolk, Va.....	124,915	39	16.3	11.7	5	7	88
Oakland, Calif.....	249,066	48	10.4	9.2	4	3	51
Omaha, Nebr.....	204,382	49	12.5	13.0	8	7	87
Paterson, N. J.....	139,579	55	20.5	16.6	7	6	112
Philadelphia, Pa.....	1,922,788	706	19.1	15.2	82	64	106
Pittsburgh, Pa.....	607,902	234	20.1	13.5	26	23	90
Portland, Oreg.....	273,621	53	10.1	10.8	6	4	61
Providence, R. I.....	242,378	81	17.4	16.2	11	10	90
Richmond, Va.....	181,044	63	18.1	14.0	7	6	86
Rochester, N. Y.....	317,867	69	11.3	11.0	9	12	71
St. Louis, Mo.....	803,853	231	15.0	13.2	12	11	.....
St. Paul, Minn.....	241,891	62	13.4	13.5	7	8	65
Salt Lake City, Utah.....	126,241	18	7.4	13.5	2	3	33
San Antonio, Tex.....	184,727	50	14.1	.....	10	.....	.....
San Francisco, Calif.....	539,038	131	12.7	17.1	9	6	54
Seattle, Wash.....	315,312	62	10.3	9.9	2	5	18
Spokane, Wash.....	104,573	26	13.0	19.0	2	5	44
Springfield, Mass.....	144,227	29	10.5	13.0	3	4	43
Syracuse, N. Y.....	184,511	49	13.8	15.3	3	9	39
Tacoma, Wash.....	101,731	31	15.9	.....	5	.....	125
Toledo, Ohio.....	268,338	76	14.8	12.6	11	4	111
Trenton, N. J.....	127,390	46	18.8	21.3	5	4	85
Washington, D. C.....	437,571	234	27.9	16.8	29	15	166
Wilmington, Del.....	117,728	50	22.1	13.5	7	5	142
Worcester, Mass.....	191,927	51	13.9	13.0	9	3	101
Yonkers, N. Y.....	107,520	24	11.6	8.4	3	0	65
Youngstown, Ohio.....	132,358	30	11.8	15.0	6	5	81

\* Enumerated population Jan. 1, 1920.

\* Estimated population July 1, 1922.

## PREVALENCE OF DISEASE.

*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.*

**UNITED STATES.**

## CURRENT STATE SUMMARIES.

### Reports for Week Ended February 3, 1923.

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers.

ALABAMA.		Cases.	CALIFORNIA—continued.		Cases.
Chicken pox.....		15	Lethargic encephalitis:		
Dengue.....		14	Los Angeles.....		2
Diphtheria.....		19	Measles.....		159
Influenza.....		719	Rabies in man—Los Angeles.....		1
Malaria.....		11	Scarlet fever.....		135
Measles.....		39	Smallpox.....		11
Ophthalmia neonatorum.....		3	Typhoid fever.....		7
Pellagra.....		3			
Pneumonia.....		177	COLORADO.		
Scarlet fever.....		21	(Exclusive of Denver.)		
Smallpox.....		5	Chicken pox.....		17
Trachoma.....		1	Diphtheria.....		53
Tuberculosis.....		51	Influenza.....		3
Typhoid fever.....		3	Measles.....		1
Whooping cough.....		26	Mumps.....		15
			Pneumonia.....		13
ARKANSAS.			Scarlet fever.....		31
Chicken pox.....		41	Smallpox.....		1
Diphtheria.....		9	Tuberculosis.....		3
Influenza.....		2, 007	Whooping cough.....		21
Malaria.....		19			
Measles.....		18	CONNECTICUT.		
Pneumonia.....		1	Cerebrospinal meningitis.....		2
Poliomyelitis.....		1	Chicken pox.....		43
Scarlet fever.....		1	Conjunctivitis.....		3
Smallpox.....		9	Diphtheria.....		63
Trachoma.....		1	Dysentery (bacillary).....		1
Tuberculosis.....		3	German measles.....		1
Typhoid fever.....		6	Influenza.....		159
Whooping cough.....		1	Lethargic encephalitis.....		1
			Measles.....		413
CALIFORNIA.			Mumps.....		21
Botulism—Los Angeles.....		2	Pneumonia (lobar).....		52
Cerebrospinal meningitis:			Scarlet fever.....		96
Kings County.....		1	Septic sore throat.....		1
Oakland County.....		1	Tuberculosis (all forms).....		20
San Francisco.....		4	Typhoid fever.....		1
Diphtheria.....		164	Whooping cough.....		105
Influenza.....		177			

DELAWARE.		ILLINOIS—continued.	
	Cases.		Cases.
Chicken pox.....	8	Scarlet fever:	
Diphtheria.....	5	Cook County (including Chicago).....	142
Influenza.....	25	Chicago.....	117
Measles.....	69	Hancock County.....	8
Pneumonia.....	4	Henry County.....	12
Scarlet fever:		Kane County.....	25
Wilmington.....	11	McLean County.....	9
Scattering.....	4	Macon County.....	9
Tuberculosis.....	3	Peoria County.....	19
Whooping cough.....	1	Woodford County.....	12
		Scattering.....	127
		Smallpox:	
DISTRICT OF COLUMBIA.		Carroll County.....	13
Chicken pox.....	28	Henry County.....	32
Diphtheria.....	21	Lee County.....	9
Influenza.....	46	Whiteside County.....	9
Measles.....	62	Will County.....	13
Scarlet fever.....	17	Scattering.....	15
Tuberculosis.....	26	Typhoid fever.....	20
Typhoid fever.....	1	Whooping cough.....	281
Whooping cough.....	57		
		INDIANA.	
FLORIDA.		Cerebrospinal meningitis:	
Diphtheria.....	10	Marion County.....	1
Influenza.....	159	Diphtheria.....	81
Malaria.....	5	Influenza.....	210
Pneumonia.....	14	Pneumonia.....	49
Scarlet fever.....	2	Poliomyelitis:	
Smallpox.....	6	Ripley County.....	1
Typhoid fever.....	6	Rush County.....	1
		Scarlet fever.....	181
GEORGIA.		Smallpox.....	59
Chicken pox.....	10	Typhoid fever.....	6
Dengue.....	7		
Diphtheria.....	10	IOWA.	
Dysentery (bacillary).....	1	Diphtheria.....	37
Hookworm disease.....	5	Scarlet fever.....	121
Influenza.....	1,008	Smallpox.....	12
Malaria.....	6	Typhoid fever.....	1
Measles.....	3		
Mumps.....	1	KANSAS.	
Pellagra.....	2	Chicken pox.....	110
Pneumonia.....	54	Diphtheria.....	77
Scarlet fever.....	1	Influenza.....	576
Septic sore throat.....	1	Lethargic encephalitis.....	2
Smallpox.....	12	Measles.....	46
Trachoma.....	2	Mumps.....	83
Tuberculosis (pulmonary).....	4	Pneumonia.....	110
Typhoid fever.....	4	Scarlet fever.....	125
Whooping cough.....	4	Septic sore throat.....	1
		Smallpox.....	7
ILLINOIS.		Trachoma.....	1
Cerebrospinal meningitis:		Tuberculosis.....	23
Chicago.....	2	Typhoid fever.....	1
Sangamon County.....	1	Whooping cough.....	71
Diphtheria:			
Cook County (including Chicago).....	193	LOUISIANA.	
Chicago.....	167	Dengue.....	14
Kane County.....	11	Diphtheria.....	29
Madison County.....	12	Influenza.....	555
Scattering.....	122	Scarlet fever.....	5
Influenza:		Smallpox.....	17
Chicago.....	300	Typhoid fever.....	13
Scattering.....	425	Whooping cough.....	28
Pneumonia.....	724		



MAINE.		MISSISSIPPI.	
	Cases.		Cases.
Chicken pox.....	24	Cerebrospinal meningitis.....	4
Diphtheria.....	11	Diphtheria.....	9
German measles.....	3	Influenza.....	5,025
Influenza.....	36	Scarlet fever.....	6
Measles.....	140	Smallpox.....	4
Mumps.....	1	Typhoid fever.....	6
Pneumonia.....	20		
Scarlet fever.....	41	MISSOURI.	
Smallpox.....	1	Chicken pox.....	20
Tuberculosis.....	4	Diphtheria.....	41
Typhoid fever.....	2	Epidemic sore throat.....	49
Whooping cough.....	54	Influenza.....	583
		Measles.....	51
MARYLAND. <sup>1</sup>		Mumps.....	2
Chicken pox.....	104	Scarlet fever.....	64
Diphtheria.....	83	Smallpox.....	21
German measles.....	4	Trachoma.....	14
Influenza.....	2,171	Tuberculosis.....	14
Lethargic encephalitis.....	1	Typhoid fever.....	1
Measles.....	195	Whooping cough.....	6
Mumps.....	86		
Pneumonia (all forms).....	330	MONTANA.	
Polio-myelitis.....	1	Diphtheria.....	17
Scarlet fever.....	94	Scarlet fever.....	20
Septic sore throat.....	2	Smallpox.....	14
Tuberculosis.....	59		
Typhoid fever.....	8	NEBRASKA.	
Whooping cough.....	146	Chicken pox.....	25
		Diphtheria.....	39
MASSACHUSETTS.		Influenza.....	38
Cerebrospinal meningitis.....	3	Measles.....	3
Chicken pox.....	181	Mumps.....	26
Diphtheria.....	221	Pneumonia.....	2
Lethargic encephalitis.....	2	Polio-myelitis:	
Measles.....	889	Box Butte County.....	1
Mumps.....	212	Scarlet fever:	
Ophthalmia neonatorum.....	27	Omaha.....	10
Pneumonia (lobar).....	216	Scattering.....	61
Polio-myelitis.....	1	Septic sore throat.....	2
Scarlet fever.....	267	Smallpox.....	4
Tuberculosis (all forms).....	170	Tuberculosis.....	1
Typhoid fever.....	11	Typhoid fever.....	1
Whooping cough.....	370	Whooping cough.....	16
MICHIGAN.		NEW JERSEY.	
Diphtheria.....	170	Cerebrospinal meningitis.....	3
Measles.....	112	Chicken pox.....	152
Pneumonia.....	415	Diphtheria.....	176
Scarlet fever.....	432	Influenza.....	258
Smallpox.....	70	Measles.....	1,437
Tuberculosis.....	55	Pneumonia.....	227
Typhoid fever.....	17	Scarlet fever.....	223
Whooping cough.....	258	Typhoid fever.....	5
		Whooping cough.....	135
MINNESOTA.			
Cerebrospinal meningitis.....	2	NEW MEXICO.	
Chicken pox.....	38	Chicken pox.....	27
Diphtheria.....	101	Diphtheria.....	32
Lethargic encephalitis.....	3	Influenza.....	48
Measles.....	270	Measles.....	3
Pneumonia.....	4	Mumps.....	3
Scarlet fever.....	201	Pneumonia.....	13
Smallpox.....	72	Scarlet fever:	
Tuberculosis.....	45	Albuquerque.....	9
Typhoid fever.....	4	Scattering.....	18
Whooping cough.....	8	Smallpox.....	1

<sup>1</sup> Week ended Friday.

## NEW MEXICO—continued.

	Cases.
Trachoma.....	7
Tuberculosis.....	23
Typhoid fever.....	4
Whooping cough.....	8

## NEW YORK.

(Exclusive of New York City.)

Diphtheria.....	102
Influenza.....	688
Lethargic encephalitis.....	5
Measles.....	638
Pneumonia.....	588
Poliomyelitis.....	1
Scarlet fever.....	322
Smallpox.....	12
Typhoid fever.....	12
Whooping cough.....	293

## NORTH CAROLINA.

Cerebrospinal meningitis.....	1
Chicken pox.....	135
Diphtheria.....	47
German measles.....	4
Measles.....	1,018
Scarlet fever.....	33
Septic sore throat.....	1
Smallpox.....	102
Typhoid fever.....	10
Whooping cough.....	330

## OREGON.

Chicken pox.....	19
Diphtheria:	
Portland.....	10
Scattering.....	3
Influenza.....	18
Lethargic encephalitis.....	12
Measles.....	6
Mumps.....	5
Pneumonia.....	15
Scarlet fever.....	12
Smallpox.....	11
Tuberculosis.....	6
Typhoid fever.....	1
Whooping cough.....	8

## SOUTH DAKOTA.

Cerebrospinal meningitis.....	2
Chicken pox.....	11
Diphtheria.....	6
Measles.....	12
Pneumonia.....	18
Scarlet fever.....	27
Smallpox.....	8
Tuberculosis.....	2
Whooping cough.....	1

## TEXAS.

Chicken pox.....	30
Dengue.....	30
Diphtheria.....	28
Influenza.....	1,637
Malaria.....	76

<sup>1</sup> Deaths.

## TEXAS—continued.

	Cases.
Mumps.....	3
Pellagra.....	3
Pneumonia.....	38
Scarlet fever.....	15
Smallpox.....	6
Trachoma.....	1
Tuberculosis.....	18
Typhoid fever.....	4
Whooping cough.....	21

## VERMONT.

Chicken pox.....	49
Diphtheria.....	3
Influenza.....	1
Measles.....	19
Mumps.....	18
Pneumonia.....	10
Scarlet fever.....	17
Whooping cough.....	27

## WASHINGTON.

Cerebrospinal meningitis:	
Chelan County.....	1
Chicken pox.....	98
Diphtheria:	
Seattle.....	11
Scattering.....	23
Lethargic encephalitis:	
Lewis County.....	1
Skagit County.....	1
Spokane.....	9
Measles.....	3
Mumps.....	31
Pneumonia.....	1
Scarlet fever:	
Seattle.....	13
Tacoma.....	20
Scattering.....	20
Smallpox:	
Spokane.....	15
Scattering.....	37
Tuberculosis.....	61
Typhoid fever.....	3
Whooping cough.....	59

## WEST VIRGINIA.

Diphtheria.....	20
Influenza:	
Huntington.....	25
Salem.....	34
Scattering.....	62
Measles—Wheeling.....	93
Scarlet fever.....	16
Typhoid fever.....	1

## WISCONSIN.

Milwaukee:	
Chicken pox.....	29
Diphtheria.....	27
Influenza.....	53
Measles.....	395
Pneumonia.....	23
Scarlet fever.....	144
Tuberculosis.....	7
Whooping cough.....	20

## WISCONSIN—continued.

Scattering:	Cases.
Cerebrospinal meningitis.....	1
Chicken pox.....	140
Diphtheria.....	82
German measles.....	3
Influenza.....	194
Measles.....	823
Pneumonia.....	24
Polio myelitis.....	2
Scarlet fever.....	164
Smallpox.....	53
Tuberculosis.....	20
Typhoid fever.....	1
Whooping cough.....	137

## WYOMING.

	Cases.
Cerebrospinal meningitis.....	2
Chicken pox.....	32
Diphtheria.....	3
Impetigo contagiosa.....	1
Influenza.....	17
Lethargic encephalitis.....	2
Measles.....	6
Mumps.....	2
Pneumonia.....	20
Scarlet fever.....	21
Smallpox.....	1
Tuberculosis.....	7

## Reports for Week Ended January 27, 1923.

## DISTRICT OF COLUMBIA.

	Cases.
Chicken pox.....	34
Diphtheria.....	53
Influenza.....	100
Measles.....	51
Scarlet fever.....	43
Tuberculosis.....	24
Whooping cough.....	53

KENTUCKY.<sup>1</sup>

Chicken pox.....	16
Diphtheria.....	13
Influenza:	
Allen County.....	210
Caldwell County.....	111
Franklin County.....	141
Jefferson County.....	100
Scattering.....	814
Measles:	
Christian County.....	14
Crittenden County.....	21
Graves County.....	19
Henderson County.....	10
Livingston County.....	20
Logan County.....	15
McCracken County.....	69

## KENTUCKY—continued.

	Cases.
Measles—Continued.	
Nelson County.....	13
Scattering.....	24
Mumps.....	1
Pellagra.....	1
Pneumonia.....	71
Scarlet fever.....	8
Smallpox.....	6
Trachoma.....	16
Tuberculosis.....	9
Typhoid fever.....	3
Whooping cough.....	24

## NORTH DAKOTA.

Chicken pox.....	20
Diphtheria.....	10
Lethargic encephalitis.....	3
Measles.....	5
Pneumonia.....	15
Scarlet fever.....	55
Smallpox.....	22
Trachoma.....	1
Tuberculosis.....	6
Typhoid fever.....	1
Whooping cough.....	6

## SUMMARY OF CASES REPORTED MONTHLY BY STATES.

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week.

State.	Cerebrospinal meningitis.	Diphtheria.	Influenza.	Malaria.	Measles.	Pellagra.	Polio myelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
DECEMBER, 1922.										
Alabama.....	1	94	494	157	1		1	46	1	30
California.....	14	784	104	11	101	2		581	39	52
Maine.....	1	59	29		63			163		14
Ohio.....	4	1,606	170		2,848		4	2,313	192	90
South Dakota.....		66	2		10			204	42	8
Virginia.....	12	917	26,393	143	282	8	1	485	15	39

<sup>1</sup> For week ended Jan. 20, 1923.

## RECIPROCAL NOTIFICATION, DECEMBER, 1922.

*Cases of communicable diseases referred during December, 1922, to other State health departments by departments of health of certain States.*

State referred by.	Acti- nomy- cosis.	Chicken pox.	Diph- theria.	Measles.	Scarlet- fever.	Tra- choma.	Tuber- culosis.	Typhoid fever.
Connecticut.....	.....	.....	1	1	.....	.....	.....	.....
Illinois.....	.....	.....	.....	.....	.....	1	15	.....
Massachusetts.....	1	.....	.....	.....	.....	.....	.....	.....
Minnesota.....	.....	.....	3	.....	.....	.....	33	4
New Jersey.....	.....	1	.....	.....	.....	.....	.....	.....
New York.....	.....	.....	1	1	.....	.....	.....	3
Ohio.....	.....	.....	.....	.....	3	1	.....	.....
Washington.....	.....	.....	.....	.....	.....	.....	.....	1

## CITY REPORTS FOR WEEK ENDED JANUARY 20, 1923.

## CEREBROSPINAL MENINGITIS.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for pre- vious years.	Week ended Jan. 20, 1923.		City.	Median for pre- vious years.	Week ended. Jan. 20, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
California:				Montana:			
San Diego.....	0	1	.....	Great Falls.....	0	1	.....
District of Columbia:				Missoula.....	0	1	.....
Washington.....	0	1	.....	New York:			
Illinois:				New York.....	5	1	1
Chicago.....	3	.....	1	Ohio:			
Springfield.....	0	1	1	Columbus.....	0	.....	1
Iowa:				South Carolina:			
Muscatine.....	0	1	1	Charleston.....	0	.....	1
Maine:				Texas:			
Bath.....	0	1	.....	San Antonio.....	0	.....	1
Massachusetts:				Virginia:			
Boston.....	0	3	.....	Petersburg.....	0	2	.....
Michigan:				West Virginia:			
Highland Park.....	0	1	1	Wheeling.....	0	1	2
Missouri:				Wisconsin:			
St. Louis.....	1	1	1	Milwaukee.....	1	2	2

## DENGUE.

City.	Cases.	Deaths.
Louisiana:		
New Orleans.....	1	.....

## CITY REPORTS FOR WEEK ENDED JANUARY 20, 1923—Continued.

## DIPHTHERIA.

See p. 268; also Current State summaries, p. 255, and Monthly summaries by States, p. 259.

## INFLUENZA.

City.	Cases.		Deaths, week ended Jan. 20, 1923.	City.	Cases.		Deaths, week ended Jan. 20, 1923.
	Week ended Jan. 21, 1922.	Week ended Jan. 20, 1923.			Week ended Jan. 21, 1922.	Week ended Jan. 20, 1923.	
Alabama:				Massachusetts—Contd.			
Birmingham		47	7	Cambridge	1	6	1
Mobile		11		Everett		30	
Montgomery		1	1	Fall River		1	
Tuscaloosa		2		Framingham		3	
Arkansas:				Greenfield		3	
Little Rock		470		Haverhill	2	1	
North Little Rock		2		Lowell		1	
California:				Newton		2	
Alameda		1		Northbridge			1
Berkeley	3			Pittsfield	1		
Long Beach		4		Saugus	5		
Los Angeles	3	13	1	Springfield		1	
Oakland	1	12	1	Waltham		18	3
Pasadena		1		Winthrop	1	1	
Sacramento	3			Michigan:			
San Diego	1	1	1	Detroit	5	18	9
San Francisco	3	15	1	Flint		14	
Stockton		2		Grand Rapids		1	2
Colorado:				Kalamazoo		1	1
Denver			3	Marquette		18	
Connecticut:				Pontiac		12	
Bridgeport		1	3	Minnesota:			
Meriden	5			Minneapolis			1
New Britain	2	13	2	Missouri:			
New Haven			2	Kansas City		7	9
Stonington		1		St. Louis	1		
Waterbury	1			Montana:			
District of Columbia:				Great Falls		1	
Washington	4	67	6	Missoula	1		
Florida:				New Jersey:			
St. Petersburg		4		Clifton	5		
Tampa		15		East Orange		1	
Georgia:				Hackensack	1		
Atlanta	3	33	9	Harrison		1	
Augusta	2			Kearny	2	1	
Macon		50		Newark	16	31	
Rome		324		Trenton		5	1
Savannah		12	3	New York:			
Valdosta		2		Albany	6	9	
Illinois:				Amsterdam		23	
Chicago	12	31	5	Buffalo		6	1
Cicero		1		Cohoes		2	
Decatur		1		Dunkirk		2	
East St. Louis		12	1	Hudson	7		
Evanston		1		Ithaca			2
Jacksonville		3		Jamestown	1		1
Indiana:				Middletown		5	
Indianapolis			2	Mount Vernon		1	1
Iowa:				New York	110	169	23
Council Bluffs			1	Olean		1	
Kansas:				Port Chester	1		
Salina		12		Rochester			1
Topeka	29			Syracuse		8	
Kentucky:				North Carolina:			
Covington	1	14	4	Durham			1
Louisville		82	4	Raleigh			2
Paducah		1		Wilmington		2	
Louisiana:				Winston-Salem			1
Baton Rouge	2			Ohio:			
New Orleans	1	9	4	Akron	4	2	
Maryland:				Barberton		3	
Baltimore	15	198	6	Chillicothe		26	
Cumberland	2	3		Cincinnati	3	38	19
Frederick		7		Cleveland	4	32	1
Massachusetts:				Columbus		3	3
Belmont	1			Dayton	1		
Beverly			1	Hamilton		1	
Boston	2	41	8	Marion		6	

## CITY REPORTS FOR WEEK ENDED JANUARY 20, 1923—Continued.

## INFLUENZA—Continued.

City.	Cases.		Deaths, week ended Jan. 20, 1923.	City.	Cases.		Deaths, week ended Jan. 20, 1923.
	Week ended Jan. 21, 1922.	Week ended Jan. 20, 1923.			Week ended Jan. 21, 1922.	Week ended Jan. 20, 1923.	
Ohio—Continued.				Texas—Continued.			
Norwood.....	1	2	.....	Dallas.....	.....	6	4
Piqua.....	.....	3	.....	Houston.....	.....	.....	1
Springfield.....	.....	5	1	Vermont:	.....	.....	.....
Tiffin.....	.....	13	.....	Rutland.....	1	.....	.....
Toledo.....	.....	.....	1	Virginia:	.....	.....	.....
Oregon:				Charlottesville.....	.....	5	2
Portland.....	.....	.....	2	Lynchburg.....	.....	.....	1
Pennsylvania:				Petersburg.....	.....	10	1
Philadelphia.....	2	32	36	Richmond.....	.....	27	4
Rhode Island:				Roanoke.....	.....	1	2
Providence.....	.....	.....	1	Washington:	.....	.....	.....
South Carolina:				Seattle.....	1	.....	.....
Charleston.....	.....	35	3	West Virginia:	.....	.....	.....
Columbia.....	.....	5	.....	Charleston.....	.....	33	2
Greenville.....	.....	4	1	Fairmont.....	.....	2	.....
Tennessee:				Huntington.....	.....	20	3
Memphis.....	.....	2	6	Morgantown.....	.....	9	.....
Texas:				Wisconsin:	.....	.....	.....
Austin.....	.....	5	.....	Milwaukee.....	.....	2	.....
Corsicana.....	.....	100	.....				

## LETHARGIC ENCEPHALITIS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Oregon:			Washington:		
Portland.....	6	2	Seattle.....	4	.....
			Vancouver.....	1	.....

## MALARIA.

Alabama:			Illinois:		
Birmingham.....	.....	1	Chicago.....	.....	2
Mobile.....	.....	1			

## MEASLES.

See p. 268; also Current State summaries, p. 255, and Monthly summaries by States, p. 259.

## PELLAGRA.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Georgia:			Texas:		
Atlanta.....	.....	1	Galveston.....	.....	1
Pennsylvania:			Houston.....	.....	1
Philadelphia.....	1	1	Waco.....	.....	1

## PNEUMONIA (ALL FORMS).

Alabama:			California:		
Birmingham.....	28	10	Alameda.....	.....	2
Mobile.....	5	2	Eureka.....	1	1
Montgomery.....	.....	6	Glendale.....	.....	1
Arkansas:			Long Beach.....	2	1
Little Rock.....	30	.....	Los Angeles.....	47	23

## CITY REPORTS FOR WEEK ENDED JANUARY 20, 1923—Continued.

## PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
California—Continued.			Maine—Continued.		
Oakland.....	7	5	Bath.....		2
Pasadena.....	2		Biddeford.....	3	2
Richmond.....		1	Lewiston.....		3
Sacramento.....		4	Portland.....		4
San Bernardino.....	1		Maryland:		
San Diego.....	5	3	Baltimore.....	101	37
San Francisco.....	18	7	Cumberland.....	2	1
Stockton.....		2	Massachusetts:		
Vallejo.....		1	Arlington.....		5
Colorado:			Attleboro.....	1	
Denver.....		18	Boston.....		64
Pueblo.....		5	Braintree.....	1	
Connecticut:			Brookline.....	3	
Bridgeport.....		6	Cambridge.....	13	7
Bristol.....		1	Chelsea.....		4
Derby.....		1	Easthampton.....		1
Hartford.....	5	2	Everett.....		4
Milford.....		1	Fall River.....		6
New Britain.....		7	Gardner.....		1
New Haven.....		8	Greenfield.....	1	
District of Columbia:			Haverhill.....	1	
Washington.....		29	Holyoke.....	2	1
Florida:			Lawrence.....		3
St. Petersburg.....		1	Leominster.....	1	
Tampa.....	2		Lowell.....		6
Georgia:			Lynn.....	6	1
Atlanta.....		37	Malden.....		1
Rome.....	5		Medford.....		2
Savannah.....		5	Melrose.....	2	1
Idaho:			Methuen.....	2	
Pocatello.....		1	New Bedford.....		3
Illinois:			Newburyport.....		2
Alton.....		1	Newton.....		6
Aurora.....	2	1	Northbridge.....		1
Blue Island.....		1	Pittsfield.....		2
Centralia.....	1		Quincy.....	5	2
Chicago.....	311	94	Salem.....		2
Cicero.....	4	1	Somerville.....	9	4
Decatur.....	11	4	Southbridge.....		1
East St. Louis.....	6	4	Springfield.....	3	2
Elgin.....	3	2	Taunton.....		2
Evanston.....	6		Wakefield.....	1	
Freeport.....		2	Waltham.....	2	
Galesburg.....	3	2	Watertown.....		1
Jacksonville.....	4	3	Webster.....		1
Kewanee.....	2		Winchester.....		1
La Salle.....	5		Winthrop.....		1
Oak Park.....	4	1	Woburn.....		1
Peoria.....		6	Worcester.....		13
Springfield.....	16	7	Michigan:		
Indiana:			Ann Arbor.....	2	1
Anderson.....		2	Battle Creek.....	3	
Bloomington.....		1	Benton Harbor.....		1
East Chicago.....		1	Detroit.....	117	55
Fort Wayne.....		2	Flint.....	13	5
Gary.....		8	Grand Rapids.....	10	6
Hammond.....		2	Hamtramck.....		4
Indianapolis.....	18		Highland Park.....	6	2
Kokomo.....		2	Holland.....		1
La Fayette.....		1	Kalamazoo.....		2
Laporte.....		1	Muskegon.....	13	6
Logansport.....		4	Pontiac.....	10	3
Muncie.....		5	Port Huron.....		1
Terre Haute.....		3	Sault Ste. Marie.....	2	1
Iowa:			Minnesota:		
Marshalltown.....	5		Duluth.....	8	2
Kansas:			Faribault.....		1
Fort Scott.....		1	Minneapolis.....		5
Kansas City.....	12		St. Paul.....		13
Topeka.....	5	3	Missouri:		
Wichita.....		6	Kansas City.....	32	16
Kentucky:			St. Joseph.....		6
Covington.....		9	Montana:		
Lexington.....		6	Anaconda.....		1
Louisville.....	41	20	Great Falls.....		2
Louisiana:			Helena.....		1
New Orleans.....	17	21	Missoula.....	5	2
Maine:			Nebraska:		
Auburn.....		3	Lincoln.....		1
Bangor.....	1		Omaha.....		8

## CITY REPORTS FOR WEEK ENDED JANUARY 20, 1923—Continued.

## PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
New Hampshire:			Ohio—Continued.		
Concord.....		1	Dayton.....	1	.....
Dover.....		2	East Cleveland.....		2
Keene.....		2	Fremont.....	1	.....
New Jersey:			Hamilton.....		4
Atlantic City.....		3	Kenmore.....	1	.....
Bayonne.....	2	.....	Lima.....		4
Bloomfield.....	3	1	Lorain.....	1	.....
Clifton.....	4	3	Mansfield.....	2	1
East Orange.....	2	.....	New Philadelphia.....	1	.....
Elizabeth.....		9	Newark.....		1
Garfield.....	2	1	Norwood.....	1	2
Hackensack.....		1	Piqua.....	1	.....
Hoboken.....		4	Sandusky.....		3
Jersey City.....	3	.....	Springfield.....		4
Kearny.....	3	.....	Tiffin.....		3
Long Branch.....	1	.....	Tledo.....		14
Montclair.....	1	.....	Youngstown.....		6
Morristown.....		1	Zanesfield.....		2
Newark.....	72	13	Oklahoma:		
Orange.....	5	1	Oklahoma.....		1
Passaic.....	2	1	Oregon:		
Paterson.....	8	.....	Portland.....		5
Perth Amboy.....		3	Pennsylvania:		
Phillipsburg.....		1	Philadelphia.....	203	140
Plainfield.....	7	1	Rhode Island:		
Trenton.....	29	7	Cranston.....		1
West Hoboken.....		2	Cumberland.....		2
West Orange.....	2	.....	Newport.....		2
New Mexico:			Pawtucket.....		9
Albuquerque.....		4	Providence.....		13
New York:			South Carolina:		
Albany.....	21	.....	Charleston.....		1
Amsterdam.....	4	2	Greenville.....		2
Auburn.....			Tennessee:		
Buffalo.....	73	20	Chattanooga.....	1	.....
Dunkirk.....	2	.....	Memphis.....		20
Glens Falls.....		1	Texas:		
Hornell.....	2	1	Austin.....	6	.....
Hudson.....	1	1	Beaumont.....		1
Ithaca.....	2	1	Corpus Christi.....	2	.....
Jamestown.....		3	Dallas.....		9
Lackawanna.....	5	2	Fort Worth.....		5
Lockport.....	3	1	Houston.....		5
Middletown.....	2	1	San Antonio.....		6
Mount Vernon.....	5	.....	Waco.....		3
New York.....	374	220	Utah:		
Niagara Falls.....	11	3	Salt Lake City.....		2
North Tonawanda.....	2	.....	Virginia:		
Port Chester.....	1	.....	Alexandria.....	4	1
Poughkeepsie.....	7	2	Charlottesville.....		5
Rochester.....	14	10	Lynchburg.....		1
Rome.....		2	Norfolk.....		3
Saratoga Springs.....		1	Petersburg.....		4
Schenectady.....	6	1	Portsmouth.....		2
Syracuse.....	27	7	Richmond.....		29
Troy.....	6	3	Roanoke.....	7	1
Watertown.....	12	1	West Virginia:		
White Plains.....	4	1	Bluefield.....		1
Yonkers.....	12	8	Charleston.....		3
North Carolina:			Clarkburg.....		1
Durham.....		1	Huntington.....		2
Greensboro.....		3	Parkersburg.....		1
Raleigh.....		3	Wheeling.....		5
Salisbury.....		2	Wisconsin:		
Wilmington.....		1	Ashland.....		1
Winston-Salem.....		1	Beloit.....		1
Ohio:			Fond du Lac.....		1
Akron.....	16	.....	Kenosha.....		2
Barberton.....	3	1	Madison.....	4	1
Bucyrus.....		1	Milwaukee.....	25	.....
Cambridge.....	1	.....	Racine.....		4
Canton.....		5	Sheboygan.....	2	1
Chillicothe.....	2	1	Superior.....		1
Cincinnati.....		24	Wyoming:		
Cleveland.....	95	33	Cheyenne.....		1
Columbus.....		23			



## CITY REPORTS FOR WEEK ENDED JANUARY 20, 1923—Continued.

## POLIOMYELITIS (INFANTILE PARALYSIS).

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Jan. 20, 1923.		City.	Median for previous years.	Week ended Jan. 20, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
Connecticut:				Missouri:			
Stonington.....		1		St. Louis.....	0	1	1
Massachusetts:				New York:			
Boston.....	0	1		New York.....	0	1	
Michigan:							
Ann Arbor.....	0		1				

## RABIES IN ANIMALS.

City.	Cases.
California:	
Los Angeles.....	6
Georgia:	
Savannah.....	2
Missouri:	
Kansas City.....	2
Texas:	
Beaumont.....	1
Virginia:	
Alexandria.....	1

## SCARLET FEVER.

See p. 268; also Current State summaries, p. 255, and Monthly summaries by States, p. 259.

## CITY REPORTS FOR WEEK ENDED JANUARY 20, 1923—Continued.

## SMALLPOX.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Jan. 20, 1923.		City.	Median for previous years.	Week ended Jan. 20, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
California:				Nebraska:			
Alameda.....	0	1	.....	Omaha.....	9	1	.....
Oakland.....	0	1	.....	New York:			
San Francisco.....	0	5	.....	Jamestown.....	0	11	.....
Colorado:				Niagara Falls.....	0	1	.....
Denver.....	8	7	.....	North Carolina:			
Florida:				Winston-Salem.....	1	14	.....
St. Petersburg.....	.....	7	.....	North Dakota:			
Georgia:				Grand Forks.....	1	2	.....
Atlanta.....	2	1	.....	Ohio:			
Savannah.....	0	1	.....	Columbus.....	1	2	.....
Valdosta.....	0	1	.....	Dayton.....	2	2	.....
Illinois:				Sandusky.....	0	5	.....
Freeport.....	0	1	.....	Toledo.....	0	2	.....
Indiana:				Oklahoma:			
Anderson.....	0	1	.....	Oklahoma.....	5	1	.....
Fort Wayne.....	2	1	.....	Oregon:			
Gary.....	1	9	.....	Portland.....	5	13	.....
Logansport.....	0	2	.....	Pennsylvania:			
Iowa:				Philadelphia.....	0	3	.....
Clinton.....	0	1	.....	Tennessee:			
Council Bluffs.....	2	1	..... 1	Knoxville.....	1	2	.....
Davenport.....	2	5	.....	Memphis.....	2	3	.....
Sioux City.....	6	1	.....	Texas:			
Kentucky:				Dallas.....	4	1	.....
Covington.....	0	1	.....	Fort Worth.....	0	2	.....
Michigan:				Utah:			
Detroit.....	6	1	.....	Salt Lake City.....	4	3	..... 4
Flint.....	1	1	.....	Virginia:			
Grand Rapids.....	0	1	.....	Roanoke.....	0	1	.....
Minnesota:				Washington:			
Duluth.....	0	12	.....	Seattle.....	4	8	.....
Minneapolis.....	19	13	.....	Spokane.....	14	9	.....
St. Paul.....	22	22	.....	Wisconsin:			
Montana:				Milwaukee.....	7	1	.....
Great Falls.....	2	3	.....	Stevens Point.....	.....	1	.....
Helena.....	.....	1	.....	Superior.....	2	21	.....
Missoula.....	0	5	.....				

## TETANUS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Alabama:			Pennsylvania:		
Birmingham.....	.....	1	Philadelphia.....	3	1
Missouri:			Texas:		
St. Louis.....	1	.....	Houston.....	.....	1
New York:					
New York.....	.....	1			

## CITY REPORTS FOR WEEK ENDED JANUARY 20, 1923—Continued.

## TUBERCULOSIS.

See p. 268; also Current State summaries, p. 255.

## TYPHOID FEVER.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 and 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for pre- vious years.	Week ended Jan. 20, 1923.		City.	Median for pre- vious years.	Week ended Jan. 20, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
Alabama:				Michigan:			
Birmingham.....	1	.....	1	Grand Rapids.....	0	1	.....
Arkansas:				Muskegon.....	0	1	.....
Little Rock.....	0	1	.....	Minnesota:			
California:				Minneapolis.....	2	1	.....
Los Angeles.....	3	3	.....	Montana:			
Sacramento.....	1	2	.....	Great Falls.....	0	1	.....
San Bernardino.....	0	1	.....	Nebraska:			
San Francisco.....	1	1	.....	Lincoln.....	0	1	.....
Colorado:				New Jersey:			
Pueblo.....	0	1	.....	Newark.....	0	3	.....
Connecticut:				Trenton.....	0	1	.....
Bridgeport.....	0	1	.....	New York:			
District of Columbia:				Albany.....	0	1	.....
Washington.....	1	1	.....	Buffalo.....	2	1	.....
Georgia:				Ithaca.....	0	1	.....
Atlanta.....	0	.....	1	New York.....	9	14	4
Rome.....	0	1	.....	North Carolina:			
Savannah.....	1	1	.....	Wilmington.....	0	1	.....
Illinois:				Ohio:			
Chicago.....	5	1	.....	Cleveland.....	1	2	.....
Jacksonville.....	0	1	.....	Niles.....	0	1	.....
Springfield.....	0	1	.....	Pennsylvania:			
Indiana:				Allentown.....	0	1	.....
Fort Wayne.....	0	1	1	New Kensington.....	0	1	.....
Iowa:				Philadelphia.....	4	1	1
Council Bluffs.....	0	.....	1	Tennessee:			
Louisiana:				Memphis.....	0	1	1
New Orleans.....	3	8	1	Texas:			
Maine:				Austin.....	0	1	.....
Lewiston.....	0	1	.....	Beaumont.....	0	1	.....
Maryland:				Washington:			
Baltimore.....	4	2	.....	Seattle.....	0	1	.....
Massachusetts:				Spokane.....	0	1	.....
Boston.....	1	1	.....	West Virginia:			
Chelsea.....	0	1	.....	Wheeling.....	0	1	.....
Fitchburg.....	0	4	1	Wisconsin:			
Gardner.....	0	1	.....	Kenosha.....	0	1	.....
Lawrence.....	1	1	.....	Madison.....	0	1	.....
Medford.....	0	.....	2	Milwaukee.....	1	.....	1
Newburyport.....	0	1	.....	Sheboygan.....	0	1	.....
Southbridge.....	0	2	.....				

## TYPHUS FEVER.

City.	Cases.	Deaths.
Connecticut:		
New Haven.....	1	.....

## CITY REPORTS FOR WEEK ENDED JANUARY 20, 1923—Continued.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tubercu- losis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Alabama:										
Birmingham.....	178,806	61	12		5		5		10	6
Mobile.....	60,777		2				2		2	3
Montgomery.....	43,464	27							2	2
Tuscaloosa.....	11,996		2				1			
Arkansas:										
Hot Springs.....	11,695	3								
Little Rock.....	65,142		2		2		2		2	
North Little Rock.....	14,048		1		1					
California:										
Alameda.....	28,806	8					1		1	
Eureka.....	12,923	6			1		3			
Glendale.....	13,536	7								1
Long Beach.....	55,593	19			13		1			1
Los Angeles.....	576,673	211	43	6	29		31		61	24
Oakland.....	216,261	69	9	1	1		6		5	3
Pasadena.....	45,354	11	6		2		8		4	
Richmond.....	16,843	1					1			
Riverside.....	19,341	5	1		1		4		1	
Sacramento.....	65,908	18	1	1			1		3	2
San Bernardino.....	18,721	13	2				1		2	2
San Diego.....	74,683	39	2		10		5		3	2
San Francisco.....	506,676	158	32	1	5		15		32	10
Santa Ana.....	15,485	11			1		4			1
Santa Cruz.....	10,917	5			1					
Stockton.....	40,296	10	1							
Vallejo.....	21,107	4								
Colorado:										
Denver.....	256,491	89	39	1	5		23			16
Pueblo.....	43,050	18	2		1		2			2
Connecticut:										
Bridgeport.....	143,555	46	13	1	80		15		4	3
Bristol.....	20,620	5			2					
Derby.....	11,238	2								
Fairfield (town).....	11,475	0			45					
Hartford.....	138,036	39	10		2		6		1	
Manchester (town).....	18,370	2	1				1			
Meriden (city).....	29,867		1				1			
Milford (town).....	10,193	1			14				1	
New Britain.....	59,316	19	5	1	63		1			
New Haven.....	162,537	33			67		4		5	
Stonington (town).....	10,236	2	1		15					
District of Columbia:										
Washington.....	437,571	162	22	3	40		30		27	15
Florida:										
St. Petersburg.....	14,237	8			1					
Tampa.....	51,608	16							1	3
Georgia:										
Atlanta.....	200,616	104	2		1		4		1	6
Brunswick.....	14,413	0	1							
Macon.....	52,995		1		40		1			
Savannah.....	83,252	35	1						1	3
Valdosta.....	10,783	4							1	1
Idaho:										
Boise.....	21,393	8			1					
Pocatello.....	15,001	5								
Illinois:										
Alton.....	24,682	8	3		1		4	1		
Aurora.....	36,397	18	9		1		1		2	1
Blue Island.....	11,424	3	2							
Centralia.....	12,491	9	1				1			
Chicago.....	2,701,705	625	182	12	221	5	104	1	220	42
Cicero.....	44,995	3	5		3		2			
Decatur.....	43,818	14	5		1		1			
East St. Louis.....	66,767	17	1		3				1	1
Elgin.....	27,454	9			2		1			
Evanston.....	37,224	15	4		4		6		4	
Forest Park.....	10,768		1				1			
Freeport.....	19,669	7	5	1			1			
Galesburg.....	23,834	12			5					
Freeport.....	15,713	7	4				1			
Jacksonville.....	15,713								1	1
Kewanee.....	16,023	10								
La Salle.....	13,050	2			54					
Mattoon.....	13,552	2							1	

## CITY REPORTS FOR WEEK ENDED JANUARY 20, 1923—Continued.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tubercu- losis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Illinois—Continued.										
Oak Park.....	39,858	11			4		3		1	1
Pekin.....	12,086		1							
Peoria.....	76,121	23			1		18	1		
Springfield.....	59,183	21	4		38		1			
Indiana:										
Anderson.....	29,767	12	1		1					
Bloomington.....	11,595	10							1	1
Crawfordsville.....	10,139	1					2			
East Chicago.....	35,967	11			2		1			2
Fort Wayne.....	86,549	33	1				8			
Frankfort.....	11,585	4	1							
Gary.....	55,378	15			1		2			
Hammond.....	36,004	9	2		7		2			
Huntington.....	14,000	3								
Indianapolis.....	314,194	92	30		5		6		3	
Kokomo.....	30,067	9	5		1					
La Fayette.....	22,496	13	4						1	2
Laporte.....	15,168	8	1		5					
Logansport.....	21,626	9			6				1	
Mishawaka.....	15,195	3	1		31		1			
Muncie.....	36,524	15	2		2					
South Bend.....	70,983	18	1		60		3		1	
Terre Haute.....	66,083	24	1		3		6			1
Iowa:										
Burlington.....	24,057	5	1				2			
Cedar Rapids.....	45,566		2				2			
Clinton.....	24,151		8							
Council Bluffs.....	36,162	9					3			
Davenport.....	56,727		16	1	1		2			
Dubuque.....	39,141				44		3			
Iowa City.....	11,267		1				2			
Marshalltown.....	15,731				1		3			
Mason City.....	20,065	5	5							
Muscatine.....	16,068	4			2		3			
Sioux City.....	71,227		5				4		3	
Waterloo.....	36,230		1		1		4			
Kansas:										
Coffeyville.....	13,452	1					1			
Fort Scott.....	10,693	4	4							
Hutchinson.....	23,298		1				3			
Kansas City.....	101,177		5		2		4			
Lawrence.....	12,456	4								
Leavenworth.....	16,912								1	
Parsons.....	16,028	4								
Salina.....	15,085	4	2		1					
Topeka.....	50,022	13	8		1		7		2	
Wichita.....	72,217	30	12				1		1	1
Kentucky:										
Covington.....	57,121	34	3				2		4	2
Henderson.....	12,169	1			19		1			
Lexington.....	41,534	23	2							3
Louisville.....	234,891	89		1	1		1		17	4
Paducah.....	24,735				69					
Louisiana:										
New Orleans.....	387,219	146	18	1	2		4		23	17
Maine:										
Auburn.....	16,985	8					3			
Bangor.....	25,978						1			
Bath.....	14,731	13								1
Biddeford.....	18,008	4					3			
Lewiston.....	31,791	15					2			
Portland.....	69,272	15	2		50	1	2			
Sandford (town).....	10,691	7	2	1	1		2			
Maryland:										
Baltimore.....	733,826	252	42	6	55		41		9	17
Cumberland.....	29,837	15	2		12		2			
Frederick.....	11,066	2	1		3					
Massachusetts:										
Amesbury (town).....	10,036	1								
Arlington (town).....	18,665	11	2		6		3		1	
Attleboro.....	19,731				18				2	
Belmont (town).....	10,749	1	3		6				1	
Beverly.....	22,561	9	2		4					1

## CITY REPORTS FOR WEEK ENDED JANUARY 20, 1923—Continued.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tubercu- losis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Massachusetts—Continued.										
Boston	748,060	304	64	4	86	2	49	3	39	11
Braintree (town)	10,580	6			4		2		1	
Brookline	37,748	9	3		1		3			
Cambridge	109,604	37	5	2	49	1	7		5	3
Chelsea	43,184	15	1		15		6		3	
Chicopee	36,214	10	5	1						
Clinton	12,979	4								
Danvers	11,108						1			
Dedham	10,792	3								
Easthampton	11,961	1							1	1
Everett	40,120	8	8		9		2			
Fall River	120,485	44	9	2	60	4	5		9	3
Fitchburg	41,029	7	3				2		1	
Framingham	17,083	2								
Gardner	16,971	1					1		1	
Greenfield	15,462	3					3			
Haverhill	53,884	20	5	1			3		1	1
Holyoke	60,203	18	6	1			4			
Lawrence	94,270	44	3		2		1		2	3
Leominster	19,744	6								
Lowell	112,759	40	2		54		10		5	4
Lynn	99,148	32	6	1	116		6		5	1
Malden	49,103	21	3		4		2			
Medford	39,038	10			5		2		1	
Melrose	18,204	3								
Methuen	15,189	6							1	1
New Bedford	121,217	39	1		189	5	1		6	2
Newburyport	15,618	4			4		1			
Newton	46,054	14	1		11		4			
North Adams	22,282	8	1						2	1
Northampton	21,951	9					2			1
Northbridge	10,174	4								
Pittsfield	41,763	10	1				3			
Plymouth	13,045	0								
Quincy	47,876	7	2				10			1
Salem	42,529	17	5		2		3			1
Somerville	93,091	25	4		10		8		2	1
Southbridge	14,245	7	1		4					
Springfield	129,614	34	4	1	4		12		3	3
Taunton	37,137	11	1		32	1	3		3	
Wakefield	13,025	5					6			
Waltham	30,915	18	1				4			
Watertown	21,457	2	4							
Webster	13,258	6					1			
West Springfield	13,443	1								
Westfield	18,604	1	1							
Winchester	10,485	2					6			
Winthrop	15,455	2			2					
Woburn	16,574	4								
Worcester	179,754	50	11	1	9		14		5	3
Michigan:										
Alpena	11,101		3	1			3			
Ann Arbor	19,516	11	4		5		1		1	
Battle Creek	36,164		8		2		8			
Benton Harbor	12,233	2	1		13					
Detroit	993,678	288	58	2	22	1	112	1	70	11
Flint	91,599	29	20		5		20	1	1	1
Grand Rapids	137,634	50	11		2		23		7	1
Hamtramck	48,615	10	4		1				1	1
Highland Park	46,499	11	2				3			
Holland	12,183	1	1				1			
Ironwood	15,739	4					1			
Kalamazoo	48,487	21	4				5		3	1
Marquette	12,718						1			
Muskegon	36,570	12	2		2					
Pontiac	34,273	7	1				2			
Port Huron	25,944	5			1		1			
Sault Ste. Marie	12,096	7							1	
Minnesota:										
Duluth	98,917	18	1		93		19		4	1
Faribault	11,089	5					2			
Hibbing	15,089	3			1		14	1	1	1
Mankato	12,469						4			

## CITY REPORTS FOR WEEK ENDED JANUARY 20, 1923—Continued.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tubercu- losis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Minnesota—Continued.										
Minneapolis.....	380,582	88	31	2	1		39	3	21	6
Rochester.....	13,722	13	2		1					2
St. Cloud.....	15,873		3							
St. Paul.....	234,608	57	23		71		61	4	12	4
Winona.....	19,143	8					1			
Missouri:										
Joplin.....	29,902		1							
Kansas City.....	324,410	115	18		3		9	1	8	4
St. Joseph.....	77,939	26	6				8			
St. Louis.....	772,897	212	46	3	58		27	1	27	13
Montana:										
Anaconda.....	11,668	2					1			
Billings.....	15,100	3	2				1			
Great Falls.....	24,121	6	1		2				1	
Helena.....	12,037	9					1			1
Missoula.....	12,668	10					1		1	
Nebraska:										
Lincoln.....	54,948	18	4	1			1		1	
Omaha.....	191,601	41	12				5			3
Nevada:										
Reno.....	12,016	4								1
New Hampshire:										
Berlin.....	16,104	3							3	
Concord.....	22,167	6								
Dover.....	13,029	3								
Keene.....	11,210	4								
New Jersey:										
Asbury Park.....	12,400	4								
Atlantic City.....	50,707	15	1		95		1			2
Bayonne.....	76,754		3						1	
Bloomfield.....	22,019	4			9		15		1	
Clifton.....	26,470	8	1		15	1	6		2	
East Orange.....	50,710	11			18		1			1
Elizabeth.....	95,783		12	1	91	3	7		2	1
Garfield.....	19,381	3	2		4				1	
Hackensack.....	17,667	6	2		1		6			
Harrison.....	15,721	1	1		2				2	
Hoboken.....	68,166	21	3	1			1		1	
Jersey City.....	298,103		22		24		12		15	
Kearny.....	26,724	7	3				1			
Long Branch.....	13,521	4	2							1
Montclair.....	28,810	1			3		4		3	
Morristown.....	12,548	8			22		1			
Newark.....	414,524	97	19	1	193	1	19		18	
Orange.....	33,268	8	1		32		1			
Passaic.....	63,841	12	4		14	1			1	1
Paterson.....	135,875		4		4		6		7	
Perth Amboy.....	41,707	11	2	2			7		2	1
Phillipsburg.....	16,923	3								
Plainfield.....	27,700	9			2					
Summit.....	10,174	2			2					
Trenton.....	119,289	53	30	3	1		8		3	4
West Hoboken.....	40,074	5	1				2			
West New York.....	29,926	2	1		1					
West Orange.....	15,573	1			27		4			
New Mexico:										
Albuquerque.....	15,157	12								4
New York:										
Albany.....	113,344		4				7		5	
Amsterdam.....	33,524	8	3							
Auburn.....	36,192	13	5	1						
Buffalo.....	506,775	152	19	3	161	1	39		22	10
Cohoes.....	22,987	7	1							
Dunkirk.....	19,336						4		4	
Geneva.....	14,648	3								1
Glens Falls.....	16,638	3							2	
Hornell.....	15,025	4								
Hudson.....	11,745	6	1	1						
Ithaca.....	17,004	10					7			
Jamestown.....	38,917	13								
Lackawanna.....	17,918	7	1				3		1	
Lockport.....	21,308	9					1			
Middletown.....	18,420				2				1	

## CITY REPORTS FOR WEEK ENDED JANUARY 20, 1923—Continued.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tubercu- losis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
New York—Continued.										
Mount Vernon.....	42,726	14	1		35		2		1	1
New York.....	5,560,048	1,453	186	24	276	5	256	1	247	76
Newburgh.....	30,366	15					2			1
Niagara Falls.....	50,760	12	3		1		1		1	
North Tonawanda.....	15,482	4			2					
Olean.....	20,506	5	5	1	8		3			
Peekskill.....	15,868	2					6			
Port Chester.....	16,573	3			2		1			
Poughkeepsie.....	35,000	11			1		4			
Rochester.....	295,750	86	7	2	81	1				9
Rome.....	28,341	12	2							
Saratoga Springs.....	13,181	5							3	1
Schenectady.....	88,723	19			4		13		1	
Syracuse.....	171,717	55	24	2	3		17		3	4
Troy.....	72,013	30	5						5	3
Watertown.....	31,285	10			1		3			1
White Plains.....	21,031	3					4			
Yonkers.....	100,176		16		3		13			2
North Carolina:										
Durham.....	21,719	6	2						2	
Greensboro.....	15,861	4								
Raleigh.....	24,418	19	4		4		1			1
Rocky Mount.....	12,742	6								
Salisbury.....	13,894	9								
Wilmington.....	33,372	7								
Winston-Salem.....	48,395	21	1				3		8	1
North Dakota:										
Fargo.....	21,961						3			
Grand Forks.....	14,010		2		1		4		1	
Minot.....	10,476	1					2			
Ohio:										
Akron.....	208,435	36	9		3		11			
Ashtabula.....	22,082	4								
Barberton.....	18,811	3					2			
Bucyrus.....	10,425	4			7					1
Cambridge.....	13,104	5			4					
Canton.....	87,091	6	11		6		3		2	1
Chillicothe.....	15,831	4					1			
Cincinnati.....	401,247	163	25		5		10		8	10
Cleveland.....	796,841	205	43	6	64		175	1	26	18
Cleveland Heights.....	15,236				1		2		2	
Columbus.....	237,031	102	3		16		8		2	7
Coshocton.....	10,847				1					
Dayton.....	152,550	42	13				6			
East Cleveland.....	27,292	3			2		1		3	
East Youngstown.....	11,237	4		1				1		
Findlay.....	17,021	4								
Fremont.....	12,468	3			39	1				
Hamilton.....	39,675	13			1		1			
Kenmore.....	12,683		1							
Lancaster.....	14,706	6	4							
Lima.....	41,326	17					2			
Lorain.....	37,295		1		49		3			
Mansfield.....	27,824	10	2	1	41					1
Marion.....	27,891		1				1	1	1	
Martins Ferry.....	11,634	3	1		10					
Middletown.....	23,594	8	1				2		2	
New Philadelphia.....	10,718						2			
Newark.....	26,718	16	1		2		2		1	1
Niles.....	13,080	1			1					
Norwood.....	24,966	3	1							
Piqua.....	15,044	8					1			
Salem.....	10,305	7								
Sandusky.....	22,997	5	3		7		3			
Springfield.....	60,840	19	1		2		6			
Staubenville.....	28,508	5					2			
Tiffin.....	14,375	6								
Toledo.....	243,164	72	10	2	363	3	10	1	3	5
Youngstown.....	132,358	30	31	3	5		8		2	2
Zanesville.....	29,509	10	3		11		2		1	
Oklahoma:										
Oklahoma.....	91,295	19	1		3		8			
Tulsa.....	72,075		1		14		2			



## CITY REPORTS FOR WEEK ENDED JANUARY 20, 1923—Continued.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tubercu- losis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Oregon:										
Portland	258,238	78	13		3		5		23	9
Pennsylvania:										
Allentown	73,502		12		106		3		1	
Altoona	60,331		4		93					
Ambridge	12,730				20				1	
Beaver Falls	12,802								1	
Berwick	12,181		3				1			
Bethlehem	50,358		10		19		1		1	
Braddock	20,879				1					
Bristol	10,273		3		1					
Butler	23,778				2				1	
Canonsburg	10,632				3					
Carbondale	18,640		1				1			
Carnegie	11,516				44					
Carriek	10,504				4					
Chambersburg	13,171		1		7		3			
Chester	58,030				94					
Coatesville	14,515		1		10				4	
Connellsville	13,804		2		2					
Dickson	11,049		1		6					
Donora	14,131				7					
Dubois	13,681		5				2			
Dunmore	20,250		3						1	
Duquesne	19,011		1		40					
Easton	33,813		2		7					
Erie	93,372		2		2		8		3	
Farrell	15,586		1		2		1		1	
Greensburg	15,033				21		2			
Harrisburg	75,917		3		95		18			
Hazleton	32,277		2						2	
Homestead	20,452		2		6					
Jeannette	10,627				2					
Johnstown	67,327		2		6		4			
Lancaster	53,150		2		52		9		1	
Lebanon	24,643				84				5	
McKees Rocks	16,713		3		2					
McKeesport	46,781		1		11				1	
Mahanoy City	15,599				2					
Monessen	18,179		2		2					
Mount Carmel	17,499		2							
Nanticoke	22,614		1		3		1			
New Castle	44,938								9	
New Kensington	11,987		1		3		2		1	
Norristown	32,319				56					
North Braddock	14,928		1		18					
Oil City	21,274				9		3			
Olyphant	10,236								2	
Philadelphia	1,823,779	708	94	7	894	19	51		120	53
Phoenixville	10,484				82					
Pittsburgh	588,343		21		316		25		17	
Pittston	18,497		1		1					
Pottstown	17,431				49					
Pottsville	21,876		1		5				1	
Reading	107,784		5		232				2	
Scranton	137,783		3		44		1		4	
Shamokin	21,204		1		1					
Sharon	21,747				4				1	
Shenandoah	24,726		1							
Steelton	13,428				61					
Sunbury	15,721		1							
Swissvale	10,908		1		3		1		1	
Tamaqua	12,363				12					
Uniontown	15,692				1		1			
Warren	14,272								1	
Washington	21,480						1			
West Chester	11,717		1		40		3			
Wilkes-Barre	73,833		1		5				1	
Wilksburg	24,403		1		16		1			
Woodlawn	12,495				4				2	
York	47,512		3		7		7		1	
Rhode Island:										
Cranston	29,407	8			1		1			
Cumberland (town)	10,077	3			18					
East Providence (town)	21,793		3		2		1			
Newport	30,255	6								

## CITY REPORTS FOR WEEK ENDED JANUARY 20, 1923—Continued.

## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Rhode Island—Continued.										
Pawtucket	64,248	19	1	1						
Providence	237,595	113	4	1	88	7	5			7
South Carolina:										
Charleston	67,957	29					1			2
Columbia	37,524						3			
Greenville	23,127	14			1					
South Dakota:										
Sioux Falls	25,202	8	2				2			
Tennessee:										
Chattanooga	57,895		7							
Knoxville	77,818								1	1
Memphis	162,351	85	8		159	1	2		5	3
Texas:										
Austin	34,876		3				1		1	
Beaumont	40,422	11	1		1					1
Corpus Christi	10,522	4	2							
Corsicana	11,356	3	1							
Dallas	158,976	52	7		2		4			5
Forth Worth	106,482	21	5				1		2	1
Galveston	44,255	10					1		1	3
Houston	138,276	46	13	1			3			2
San Antonio	161,379	57	2				1			7
Waco	38,500	23	3							1
Utah:										
Salt Lake City	118,110	33	9		1		7		2	3
Vermont:										
Burlington	22,779	9								
Rutland	14,954	4								
Virginia:										
Alexandria	18,060	6			1					
Charlottesville	10,688	18	1							2
Lynchburg	30,070	7	4		3		1			
Norfolk	115,777		6	1	1		3		14	5
Petersburg	31,012	16	1							1
Portsmouth	54,387	9					1			
Richmond	171,667	61	5		1		1	1	9	6
Roanoke	50,842	21	3		1		1		2	1
Washington:										
Seattle	315,312		4				14			
Spokane	104,437		8				5			
Tacoma	96,965		1		1		10			
West Virginia:										
Bluefield	15,282	4	1							
Charleston	39,608	23	2		1		3			1
Clarksburg	27,869	4	3				3	1		
Fairmont	17,851		4				4			
Huntington	50,177	18	2							2
Martinsburg	12,515		1				1			
Morgantown	12,127				2					
Moundsville	10,669	3	3							
Parkersburg	20,050	7	1				1			
Wheeling	56,208	27	2		75		3			
Wisconsin:										
Appleton	19,561	7	4				1			
Ashland	11,334	5								
Beloit	21,284	8	2		5		5			
Eau Claire	20,906				1					
Fond du Lac	23,427	5					2			
Green Bay	31,017		2	1			2			
Janesville	18,293	4			7					
Kenosha	40,472	13			180		2			
Madison	38,378	4	2		7		3			
Manitowoc	17,563		2							
Marinette	13,610	1					2		1	
Milwaukee	457,147	105	24	2	596		148	4	11	2
Oshkosh	33,162	7					4		1	
Racine	58,593	21	1		31		9		1	1
Sheboygan	30,955	12	6		3					
Stevens Point	11,371		1				1			
Superior	39,671	9	3							2
Wausau	18,661		2				3		3	
West Allis	13,745	3	5	2	5	1	5			
Wyoming:										
Cheyenne	13,829	9					2		1	1

## FOREIGN AND INSULAR.

### CUBA.

#### Communicable Diseases—Habana.

Communicable diseases have been notified at Habana as follows:

Disease.	Jan. 11-20, 1923.		Remain- ing under treatment Jan. 20, 1923.
	New cases.	Deaths.	
Chicken pox.....	5	.....	5
Diphtheria.....	3	.....	4
Leprosy.....	.....	.....	10
Malaria.....	30	2	151
Measles.....	5	.....	27
Paratyphoid fever.....	.....	.....	2
Scarlet fever.....	2	.....	3
Typhoid fever.....	14	4	273

<sup>1</sup> From the interior, 34; from abroad, 2.

<sup>2</sup> From the interior, 18; from abroad, 1.

<sup>3</sup> From abroad, 1

### JAMAICA.

#### "Alastrim."

During the two weeks ended January 13, 1923, 58 new cases of "alastrim" were reported in the island of Jamaica.

#### Typhoid Fever—Kingston and Vicinity.

During the same period 4 cases of typhoid fever were reported at Kingston, Jamaica, and 37 cases in the surrounding country.

### PANAMA CANAL.

#### Communicable Diseases—December, 1922.

Communicable diseases were notified for the Panama Canal during the month of December, 1922, as follows:

Disease.	Canal Zone.	Colon.	Panama.	Non- resident.	Total.
Chicken pox.....	6	8	3	.....	17
Dengue.....	.....	.....	.....	1	1
Diphtheria.....	1	1	10	.....	12
Dysentery.....	2	1	4	.....	7
Hookworm disease.....	11	10	34	28	83
Leprosy.....	.....	.....	.....	1	1
Malaria.....	117	7	17	28	169
Measles.....	.....	1	2	.....	3
Meningitis.....	2	1	.....	.....	3
Paratyphoid fever.....	1	.....	.....	.....	1
Pneumonia.....	4	.....	14	.....	18
Poliomyelitis.....	1	.....	1	.....	2
Relapsing fever.....	.....	.....	.....	1	1
Scarlet fever.....	.....	.....	1	.....	1
Tuberculosis.....	4	8	16	5	33
Typhoid fever.....	.....	.....	1	.....	1

## PERU.

## Plague—Smallpox—December 1-15, 1922.

During the period December 1-15, 1922, 37 cases of plague with 9 deaths were reported in Peru, and 3 cases of smallpox with 1 death occurring in the city of Lima. (For distribution of plague according to locality, see p. 277.)

## POLAND.

## Communicable Diseases—November 5-18, 1922.

Communicable diseases have been notified in Poland as follows:

*November 5-11, 1922.*

Disease.	Cases.	Deaths.	Localities having greatest number of deaths.
Cerebrospinal meningitis.....	7	7	Lodz, Warsaw City.
Diphtheria.....	105	9	Posen, Warsaw City.
Measles.....	500	10	Stanislavow, Warsaw City.
Scarlet fever.....	352	45	Do.
Smallpox.....	7	3	Kielce.
Tuberculosis.....	85	148	Lodz, Warsaw City.
Typhoid fever.....	374	39	Lodz, Lwow.
Typhus fever.....	149	9	Kielce, Volhynia.
Typhus fever, recurrent.....	146	4	Kielce, Lodz, Lwow.
Whooping cough.....	13	7	

*November 12-18, 1922.*

Cerebrospinal meningitis.....	6	3	Lodz.
Diphtheria.....	86	10	Posen, Vilna, Warsaw City.
Measles.....	772	15	Lwow, Stanislavow, Warsaw City.
Scarlet fever.....	290	41	Do.
Smallpox.....	10	2	Kielce, Stanislavow.
Tuberculosis.....	117	164	Lodz, Lwow, Warsaw City.
Typhoid fever.....	387	30	Krakow.
Typhus fever.....	219	15	Lwow, Tarnopol.
Typhus fever, recurrent.....	187	8	Nowogrodek.
Whooping cough.....	157	7	Krakow, Warsaw City.

## Dysentery—Malaria.

During the two weeks ended November 18, 1922, 138 cases of dysentery with 9 deaths were reported in Poland, occurring in the districts of Lwow and Stanislavow, and 103 cases of malaria with 1 death, reported from November 12 to 18, and occurring in the district of Tarnopol.

## RUMANIA.

## Typhus Fever—Bucharest.

Under date of January 31, 1923, typhus fever was reported present at Bucharest, Rumania, with 96 cases and 13 deaths notified to date. The disease was stated to have been imported from the Ukraine and Bessarabia.

**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.**

The reports contained in the following tables must not be considered as complete or final, as regards either the list of countries included or the figures for the particular countries for which reports are given.

**Reports Received During Week Ended February 9, 1923.<sup>1</sup>****CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
India: Calcutta .....	Dec. 10-16.....	25	8	

**PLAGUE.**

Brazil: Bahia .....	Nov. 26-Dec. 9....	3	3	
Ceylon: Colombo .....	Dec. 10-16.....	8	10	Plague rodents, 7.
China: Hongkong .....	Dec. 3-16.....	1	1	
Egypt.....				Jan. 1, 1922-Jan. 4, 1923: Cases, 487; deaths, 223.
Province— Assiout .....	Dec. 29.....	2		
Peru.....				Dec. 1-15, 1922: Cases, 37; deaths, 9.
Locality—				
Canete .....	Dec. 1-15.....	6	2	
Chiclayo (city).....	do .....	1		
Chiclayo (country).....	do .....	5		
Eten.....	do .....	1		
Guadaloupe.....	do .....	4	1	
Huacho .....	do .....	2		
Huarmey.....	do .....	1	1	
Jayanca .....	do .....	1		
Lima (city).....	do .....	5	3	
Lima (country).....	do .....	3		
Lurin .....	do .....	1		
Male .....	do .....	1		
Pueblo Nuevo.....	do .....	4	2	
San Pedro .....	do .....	1		
Trujillo .....	do .....	1		
Portuguese West Africa:				
Angola—				
Loanda .....	Oct. 27-Dec. 2....		17	

**SMALLPOX.**

Brazil: Rio de Janeiro .....	Dec. 17-23.....	7	3	
Canada:				
Ontario—				
Ottawa .....	Jan. 14-20.....	2		
Quebec.....	do .....	3		
China:				
Amoy.....	Dec. 17-23.....		1	
Chungking.....	Nov. 19-Dec. 9....			Present
Manchuria—				
Harbin.....	Dec. 11-17.....	4		
Nanking.....	Dec. 10-23.....			Do.
India:				
Calcutta .....	Dec. 10-16.....	17	4	
Karachi .....	Dec. 17-23.....	1		
Mexico:				
Chihuahua.....	Jan. 1-14.....	7	3	
San Luis Potosi.....	Jan. 14-20.....		1	
Peru: Lima .....	Dec. 1-15.....	3	1	
Poland.....				Nov. 5-13, 1922: Cases, 17; deaths, 5.
Portugal:				
Lisbon.....	Dec. 31-Jan. 6....	29		
Oporto.....	Dec. 31-Jan. 13....	3	3	

<sup>1</sup> From medical officers of the Public Health Service, American consuls, and other sources.

**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.****Reports Received During Week Ended February 9, 1923—Continued.****SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Portuguese West Africa:				
Angola—				
Loanda.....	Oct. 27-Nov. 11.....		10	
Spain:				
Seville.....	Dec. 19-31.....		8	
Do.....	Jan. 1-14.....		5	
Valencia.....	Dec. 31-Jan. 6.....	2		
Switzerland:				
Zurich.....	Dec. 24-30.....	5		
Syria:				
Aleppo.....	Dec. 31-Jan. 6.....	6	4	
Damascus.....	Nov. 21-30.....	22	3	
Union of South Africa:				
Cape Province.....	Dec. 3-9.....			Outbreaks.
Natal.....	do.....			Do.
Transvaal—				
Johannesburg.....	Nov. 1-30.....		1	
Yugoslavia:				
Serbia—				
Belgrade.....	Dec. 3-23.....	7	3	

**TYPHUS FEVER.**

Algeria:				
Algiers.....	Dec. 1-31.....	1		
Chile:				
Antofagasta.....	Dec. 24-30.....	3		
Do.....	Dec. 31-Jan. 6.....	2	1	
Egypt:				
Alexandria.....	Dec. 25-31.....	1		
Germany:				
Berlin.....	Nov. 26-Dec. 2.....		1	
Great Britain:				
Glasgow.....	Jan. 7-13.....	2		
Palestine.....				Dec. 19-25, 1922: One case; in northern section.
Poland.....				Nov. 5-18, 1922: Cases, 368; deaths, 24. Recurrent typhus: Cases, 333; deaths, 12.
Rumania:				
Bucharest.....				To Jan. 31, 1923: Cases, 96; deaths, 13.
Russia:				
Esthonia—				
Libau.....	Dec. 24-30.....	1		
Spain:				
Barcelona.....	Dec. 21-27.....		1	
Union of South Africa:				
Cape Province.....	Dec. 3-9.....			Outbreaks.
Natal.....	do.....			Do.
Transvaal—				
Johannesburg.....	Nov. 1-30.....	3	6	

**Reports Received from December 30, 1922, to February 2, 1923.<sup>1</sup>****CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Liutaoku.....	Sept. 22.....	60	20	
Chosen (Korea):				
Yalu River Region.....				Sept. 22, 1922: 30 deaths reported.
India:				Sept. 24-Nov. 11, 1922: Cases, 6,574; deaths, 4,386.
Bombay.....	Oct. 27-Nov. 4.....	1		
Calcutta.....	Nov. 12-Dec. 9.....	50	30	
Madras.....	Nov. 19-Dec. 16.....	4	2	
Rangoon.....	Nov. 12-Dec. 9.....	14	9	

<sup>1</sup> From medical officers of the Public Health Service, American consuls, and other sources.

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

**Reports Received from December 30, 1922, to February 2, 1923—Continued.**

## **CHOLERA—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Philippine Islands: Province— Laguna.....	Oct. 12-18.....	1		
Russia: Archangel (government)...	Oct. 4-7.....	7		Jan. 1-Oct. 7, 1922: Cases, 83,367.
Tashkent.....	do.....	27		Turkestan Republic: 3 cases reported on waterways.
Ukraine: Donetz (Government)...	Sept. 1-30.....	29		Sept. 1-30, 1922: Cases, 119.
Tebernigov (Government).	do.....	36		
Siam: Bangkok.....	Oct. 29-Nov. 4....	1		

## **PLAGUE.**

Azores: Fayal Island— Castelo Branco.....	Dec. 2.....		2	Vicinity of Horta. Dec. 30, 1922: Several cases.
Pico Island— Lages.....	Nov. 27-Dec. 15...		8	1 case present Dec. 15, 1922.
St. Michaels Island Ponta Delgada.....	Nov. 26-Dec. 9....	3		Nov. 12-Dec. 9, 1922: Cases, 66; deaths, 24. At localities 3-9 miles from Ponta Delgada.
Brazil: Bahia.....	Oct. 29-Nov. 18...	1	1	
Porto Alegre.....	Nov. 19-25.....	1		
British East Africa: Kenya Colony— Tanganyika Territory..	Oct. 15-Nov. 18...	1	5	
Ceylon: Colombo.....	Nov. 12-Dec. 9....	20	11	Plague rodents, 5.
China: Hongkong.....	Nov. 5-Dec. 19....	12	9	
Ecuador: Guayaquil.....	Nov. 1-Dec. 15....	1	1	Rats examined, 12,850; found infected, 58.
Egypt.....				Jan. 1-Dec. 28, 1922: Cases, 485; deaths, 228.
City— Alexandria.....	Nov. 19-25.....		2	
Port Said.....	Nov. 19-27.....	4	2	
Suez.....	Nov. 18-Dec. 5....	3	4	
Province— Assiout.....	Nov. 19-Dec. 12...	2	1	Septicemic; one case, one death.
Dakahlieh.....	Dec. 3.....	1	1	Pneumonic.
Minieh.....	Nov. 18-27.....	2	1	
India: Bombay.....	Oct. 27-Dec. 2....	30	25	Oct. 1-Nov. 11, 1922: Cases, 10,644; deaths, 8,636.
Karachi.....	Dec. 10-16.....	1	1	
Madras Presidency.....	Nov. 19-Dec. 16...	1,495	972	
Madras.....	Nov. 19-25.....	1	1	
Rangoon.....	Nov. 12-Dec. 9....	26	25	
Japan: Osaka.....				July 1-Nov. 30, 1922: Cases, 70.
Java.....				Oct. 1-31, 1922: Cases, 454; deaths, 338.
East Java— Soerabaya.....	Oct. 22-Nov. 18...	9	9	
Soerakarta— Klaten.....	Nov. 4.....			Present in epidemic form.
Toeloeng-Agoeng.....	Oct. 29-Nov. 11...	17	17	Not a seaport.
Madagascar: Province— Moramanga.....				To Oct. 30, 1922: Cases, 21; deaths, 18. Pneumonic.
Tananarive.....				To Oct. 30, 1922: Cases, 7; deaths, 7. Septicemic. Occurring in Fenoarivo region. (See Public Health Reports, Dec. 29, 1922, p. 3237.)
Do.....	Oct. 23-29.....		1	Septicemic.
Mesopotamia: Bagdad.....	Oct. 1-31.....	7		

**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.****Reports Received from December 30, 1922, to February 2, 1923—Continued.****PLAGUE—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
<b>Palestine:</b>				
Jaffa.....	Nov. 27-Dec. 4....	1		
<b>Peru:</b>				Nov. 1-30, 1922: Cases, 83; deaths, 42.
Localities—				
Cafete.....	Nov. 16-30.....	16	7	
Chepen.....	Nov. 1-15.....			Present.
Chiclayo.....	Nov. 16-30.....	11	7	
Eten.....	do.....	3		
Guadaloupe.....	Nov. 1-30.....	11	5	
Huacho.....	Nov. 16-30.....	2	1	
Huaral.....	do.....	1		
Jayanca.....	do.....	3	2	
Lambayeque.....	do.....	5	3	
Lima (Suburb).....	Nov. 1-30.....	6	1	
Lima (City).....	do.....	3	3	
Magdalena del Mar.....	Nov. 16-30.....	1		
Mosche.....	do.....	2	1	
Piura.....	do.....	8	5	
San Pedro.....	Nov. 1-30.....	5	3	
Sullana.....	Nov. 16-30.....	3	3	
Trujillo.....	Nov. 1-15.....		1	
Tuman.....	Nov. 16-30.....	3		
<b>Portugal:</b>				
Lisbon.....	Nov. 10-29.....	4	2	
<b>Portuguese West Africa:</b>				
Angola—				
Loanda.....	Oct. 1-28.....		27	Fatal cases among white population.
<b>Siam:</b>				
Bangkok.....	Nov. 12-18.....	2	1	
<b>Spain:</b>				
Barcelona.....	Nov. 15-Dec. 18...	1		Sept. 24-Nov. 14, 1922: Cases, 23; deaths, 9.
<b>Syria:</b>				
Beirut.....	Nov. 6-12.....	2	1	
<b>Turkey:</b>				
Constantinople.....	Nov. 22-28.....	2		

**SMALLPOX.**

<b>Algeria:</b>				
Algiers.....	Dec. 1-10.....	1		
<b>Arabia:</b>				
Aden.....	Nov. 19-Dec. 23...	7	3	
<b>Brazil:</b>				
Bahia.....	Nov. 5-11.....	1		
Rio de Janeiro.....	Nov. 25-Dec. 16...	27	5	
Sao Paulo.....	Oct. 16-22.....	1	1	
<b>British East Africa:</b>				
Kenya Colony—				
Tanganyika Territory..	Oct. 8-Nov. 18....	173	9	
Uganda.....	Sept. 1-30.....	1	1	
<b>Canada:</b>				
Manitoba—				
Winnipeg.....	Dec. 10-30.....	14		
Ontario.....				Dec. 1-31, 1922: Cases, 51; deaths, 1.
Hamilton.....	Dec. 31-Jan. 6.....	2		
Niagara Falls.....	Dec. 3-30.....	10		
Do.....	Dec. 31-Jan. 6.....	5		
Ottawa.....	Dec. 10-23.....	6		
Do.....	Jan. 7-13.....	8		
Toronto.....	Dec. 10-30.....	2		
Saskatchewan—				
Regina.....	Dec. 3-23.....	2		
<b>Ceylon:</b>				
Colombo.....	Nov. 12-Dec. 9....	8	3	
<b>Chile:</b>				
Concepcion.....	Oct. 30-Nov. 20...		3	
Valparaiso.....	Oct. 2-Nov. 5.....		51	
<b>China:</b>				
Amoy.....	Nov. 5-18.....		2	Nov. 26-Dec. 16, 1922: Present.
Antung.....	Nov. 13-Dec. 10...	2		
Canton.....	Oct. 1-Nov. 30.....			Prevalent.



# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

**Reports Received from December 30, 1922, to February 2, 1923—Continued.**

## **SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
China—Continued.				
Chungking.....	Nov. 5-Dec. 16.....			Present.
Foochow.....	Nov. 12-Dec. 16.....			Do.
Hongkong.....	Nov. 5-11.....		1	
Manchuria—				
Harbin.....	Nov. 20-26.....	5		
Mukden.....	Nov. 19-Dec. 16.....			Do.
Nanking.....	Nov. 5-Dec. 9.....			Do.
Chosen (Korea):				
Chemulpo.....	Oct. 1-Nov. 30.....	52	29	
Fusan.....	Nov. 1-30.....	1		
Seoul.....	Oct. 1-Nov. 30.....	6		
Czechoslovakia.				Oct. 1-31, 1922: Cases, 3.
Province—				
Bohemia.....	Oct. 1-31.....	1		
Moravia.....	do.....	1		
Slovakia.....	do.....	1		
Dominican Republic:				
Puerto Plata.....	Dec. 14-30.....	2		
Santo Domingo.....	Dec. 3-16.....			Present.
Ecuador:				
Guayaquil.....	Dec. 1-15.....	6		
France:				
Paris.....	Dec. 1-10.....	1		
Germany:				
Bremen.....	Dec. 3-9.....	1		
Great Britain:				
Liverpool.....	Dec. 11-17.....	1		From vessel.
London.....	Nov. 25-Dec. 23.....	3		
Nottingham.....	Dec. 3-9.....	1		
Greece:				
Saloniki.....	Nov. 6-Dec. 10.....	3	1	Nov. 5-18, 1922: Cases, 1,300; deaths, 276.
Zante.....	Jan. 17.....			Epidemic
India:				
Bombay.....	Nov. 5-Dec. 2.....	5	5	
Calcutta.....	Nov. 12-Dec. 9.....	17	11	
Karachi.....	Nov. 26-Dec. 16.....	4		
Madras.....	Nov. 12-Dec. 16.....	43	21	
Rangoon.....	Nov. 5-Dec. 9.....	9	2	
Java:				
East Java—				
Soerabaya.....	Nov. 5-11.....	4		
West Java—				
Batavia.....	Nov. 11-Dec. 1.....	23		City and Province.
Mesopotamia:				
Bagdad.....	Oct. 1-31.....	285	153	
Mexico:				
Chihuahua.....	Dec. 4-17.....		4	
Guadaluajara.....	Dec. 1-31.....	4		
Mexico City.....	Nov. 12-Dec. 16.....	31		Including municipalities in Federal District.
Nogales.....	Dec. 10-19.....		1	
Do.....	Dec. 31-Jan. 6.....		1	
Sonora, State.....				Nov. 1-30, 1922: Present in northern section.
Empalme.....	Nov. 1-30.....	4	1	
Torreon.....	Dec. 1-31.....		1	
Peru:				
Callao.....	Nov. 1-15.....	2		
Lima (country).....	do.....	2	1	
Poland.....				Oct. 1-Nov. 4, 1922: Cases, 54; deaths, 14.
Portugal:				
Lisbon.....	Nov. 19-Dec. 30.....	143	6	
Oporto.....	Oct. 15-Dec. 30.....	24	12	
Russia:				
Province—				
Esthonia.....	Oct. 1-Nov. 30.....	42		
Lettonia.....	Oct. 1-31.....	1		
Ukraine.....				Jan.-Sept., 1922: Cases, 8,744.

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

**Reports Received from December 30, 1922, to February 2, 1923—Continued.**

## **SMALLPOX—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Spain:				
Corunna.....	Nov. 26-Dec. 2.....	.....	1	
Huelva.....	Nov. 24-30.....	.....	1	
Seville.....	Nov. 27-Dec. 17.....	.....	24	
Valencia.....	Nov. 26-Dec. 23.....	3	.....	
Switzerland:				
Berne.....	Nov. 19-Dec. 23.....	71	.....	
Zurich.....	Nov. 19-Dec. 2.....	14	.....	
Syria:				
Aleppo.....	Nov. 19-Dec. 23.....	38	20	Dec. 3-30, 1922: Present.
Damascus.....	Nov. 1-30.....	82	16	
Tunis:				
Tunis.....	Dec. 1-22.....	2	1	
Turkey:				
Constantinople.....	Nov. 19-Dec. 16.....	122	34	
Union of South Africa:				
Cape Province.....	.....	.....	.....	Oct. 1-Nov. 30, 1922: Cases—colored, 29; white, 4.
Do.....	Oct. 29-Dec. 2.....	.....	.....	Oct. 1-Nov. 30, 1922: Cases—colored 21; white, 4. Outbreaks.
Southern Rhodesia.....	Nov. 9-15.....	3	.....	
Transvaal.....	.....	.....	.....	Oct. 1-31, 1922: Cases, 8. Outbreaks.
Do.....	Oct. 29-Nov. 4.....	.....	.....	
Yugoslavia:				
Serbia—				
Belgrade.....	Nov. 12-18.....	2	1	
On vessel:				
S. S. Huntress.....	Nov. 11.....	1	.....	At Fremantle, Australia, from Cape Town, South Africa.
—.....	Dec. 17-23.....	1	.....	At Liverpool.

## **TYPHUS FEVER.**

Algeria:				
Algiers.....	Nov. 11-20.....	1	1	
Brazil:				
Porto Alegre.....	Nov. 19-Dec. 16.....	3	.....	
Chile:				
Antofagasta.....	Nov. 12-Dec. 23.....	21	5	Nov. 11-Dec. 5, 1922; Cases, 10; deaths, 2.
Concepcion.....	Oct. 17-Nov. 27.....	.....	8	
Talcahuano.....	Nov. 12-Dec. 23.....	10	6	
China:				
Antung.....	Nov. 13-Dec. 10.....	7	.....	
Manchuria—				
Harbin.....	Nov. 20-26.....	7	.....	
Cuba:				
Matanzas.....	Dec. 25-31.....	1	1	
Czechoslovakia:				
City—				
Prague.....	Nov. 19-25.....	1	.....	
Province—				
Ruthenia.....	Oct. 1-31.....	1	.....	
Egypt:				
Alexandria.....	Nov. 19-25.....	1	1	
Cairo.....	Oct. 1-21.....	6	4	
Germany:				
Coblenz.....	Dec. 10-16.....	1	.....	
Dresden.....	do.....	1	.....	
Greece:				
Leucadia.....	Jan. 17.....	.....	.....	Present.
Prevesa.....	do.....	.....	.....	Do.
Zante.....	do.....	.....	.....	Do.
Ireland:				
Belmullet.....	June 15-Dec. 14.....	20	.....	In county Mayo.
Mexico:				
Mexico City.....	Nov. 12-Dec. 16.....	63	.....	Including municipalities in Federal district.
Palestine:				
Jaffa.....	Dec. 12-18.....	2	.....	Dec. 5-11, 1922: Cases, 2; in northern section.
Jerusalem.....	Dec. 26-Jan. 1.....	.....	1	
Persia:				
Teheran.....	Sept. 24-Oct. 24.....	1	.....	

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**

**Reports Received from December 30, 1922, to February 2, 1923—Continued.**

## **TYPHUS FEVER—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Poland.....				Oct. 1–Nov. 4, 1922: Cases, 647; deaths, 50. Recurrent typhus: Cases, 932; deaths, 20.
Portugal:				
Oporto.....	Oct. 15–Dec. 2....	1	1	
Rumania:				
Chisinau.....	Nov. 1–30.....	5		
Russia.....				July 30–Sept. 23, 1922: Cases, 23,803.
Esthonia.....	Nov. 1–30.....	1		Oct. 1–Nov. 30, 1922: Cases, 7. Recurrent typhus: Cases, 7.
Lettonia.....	Oct. 1–31.....	19		Recurrent typhus: Cases, 4.
Ukraine.....	Jan.–Sept.	307,329		
Ukraine, Tartar Republic and Siberia.	June 1–30.....	35,926		Provisional figures.
Do.....	July 1–31.....	17,262		Do.
Do.....	Aug. 1–31.....	6,864		Do.
Do.....	Sept. 1–30.....	2,388		Do.
Spain:				
Barcelona.....	Nov. 30–Dec. 6....		2	
Syria:				
Aleppo.....	Dec. 10–16.....	1	1	
Turkey:				
Constantinople.....	Nov. 27–Dec. 2....	3		
Union of South Africa.....				Oct. 1–Nov. 30, 1922: Colored—cases, 1,986; deaths, 184; white—cases, 7; deaths, 2.
Cape Province.....				Oct. 1–Nov. 30, 1922: Colored—cases, 1,799; deaths, 146; white—cases, 3; deaths, 1.
Natal <sup>1</sup> .....				Oct. 1–Nov. 30, 1922: Colored—cases, 107; deaths, 27; white—cases, 2.
Orange Free State.....				Oct. 1–Nov. 30, 1922: Colored—cases, 58; deaths, 6; white—cases, 2; deaths, 1.
Transvaal.....				Oct. 1–Nov. 30, 1922: Colored—cases, 22; deaths, 5.

## **YELLOW FEVER.**

West Africa:				
Senegal—				
Saltpond.....				Reported present Dec. 21, 1922.
Warral.....				Do.

<sup>1</sup> Report of 52 cases of typhus fever in Frere, Nov. 19–25, in Public Health Reports for Feb. 2, 1923, p. 226, was erroneous. Later information shows that they were cases of typhoid fever.